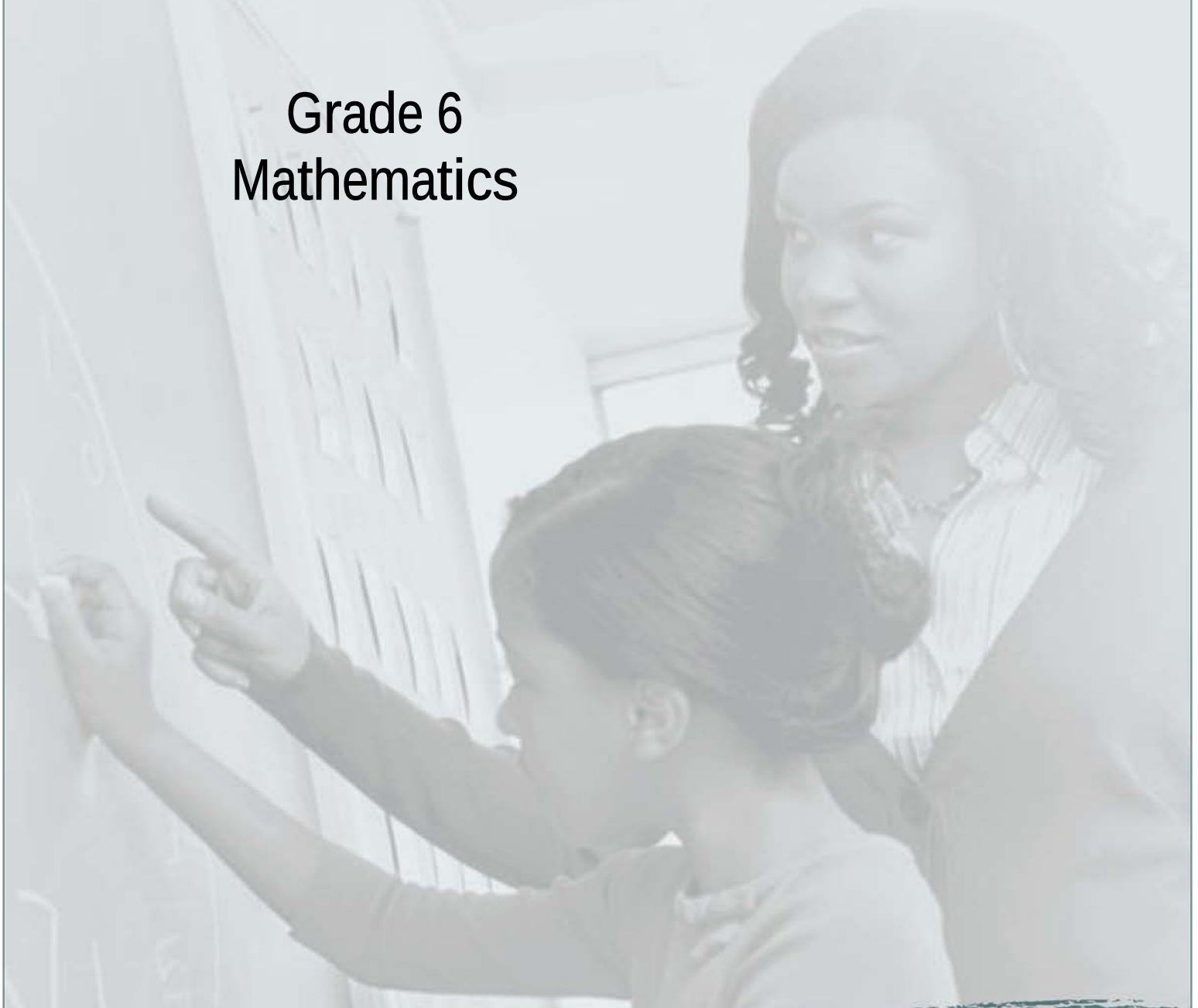
Louisiana Believes.

COMMON CORE STATE STANDARDS INITIATIVE
PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER

Grade 6 Mathematics

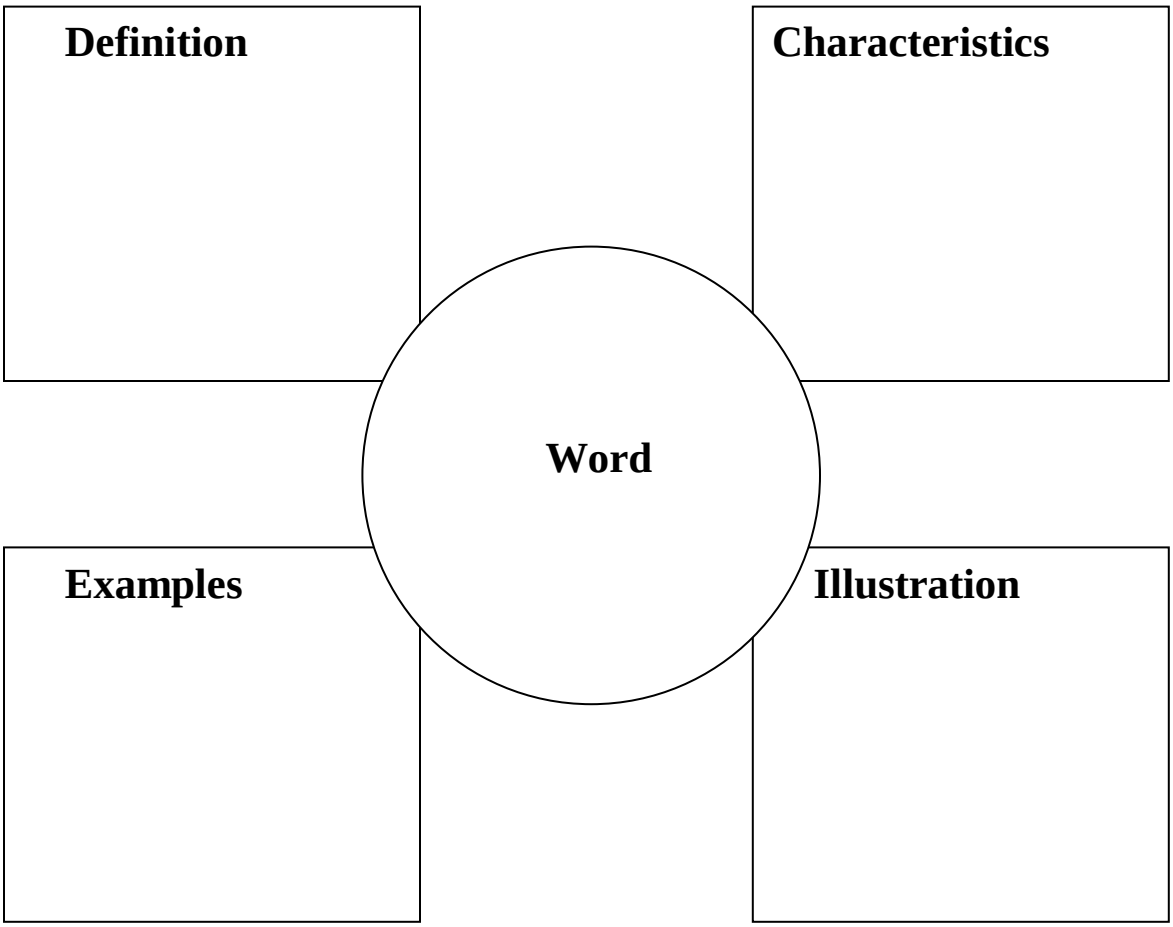


Transitional Curriculum

REVISED 2012

BLACKLINE MASTERS

LOUISIANA DEPARTMENT OF EDUCATION


Definition
Characteristics
Word
Examples
Illustration

Name _____ Date _____

Frequency Tables

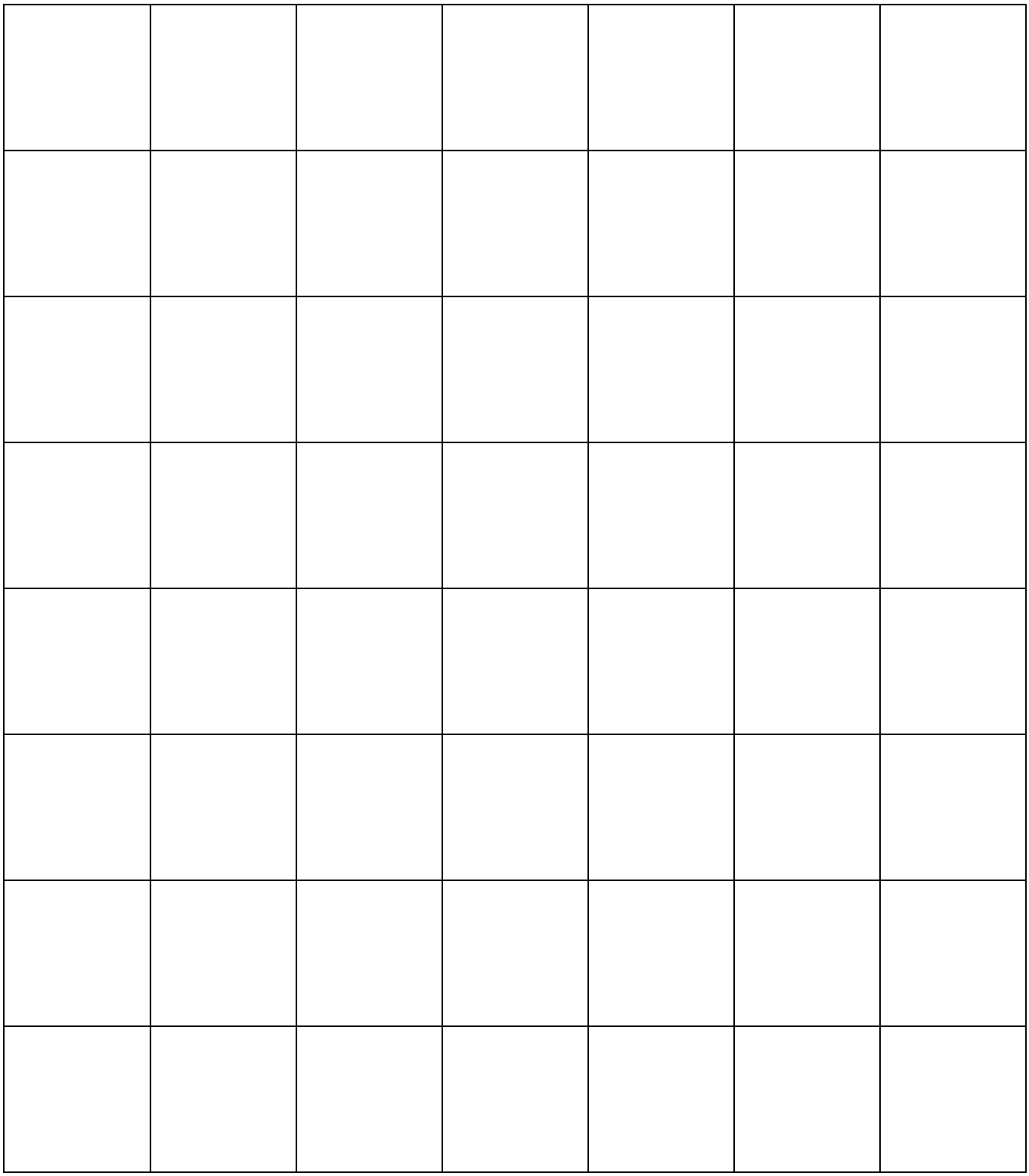
Survey at least 20 people to find out what their favorite fruit is. Record the data in a frequency table.

Fruit	Number
Grapes	
Apples	
Watermelons	
Blueberries	
Strawberries	
Bananas	
Pears	

1. Did more people choose pears or watermelons?

2. How many fewer people chose blueberries than chose strawberries?

3. How many people did not choose bananas as their favorite fruit?



Name _____ Date _____

Constructing a Stem-and-Leaf Plot

Record your data on the chart below. Then write a short interpretation of the patterns seen.

Stem	Leaf

Interpretation of patterns in data _____

_____

_____

_____

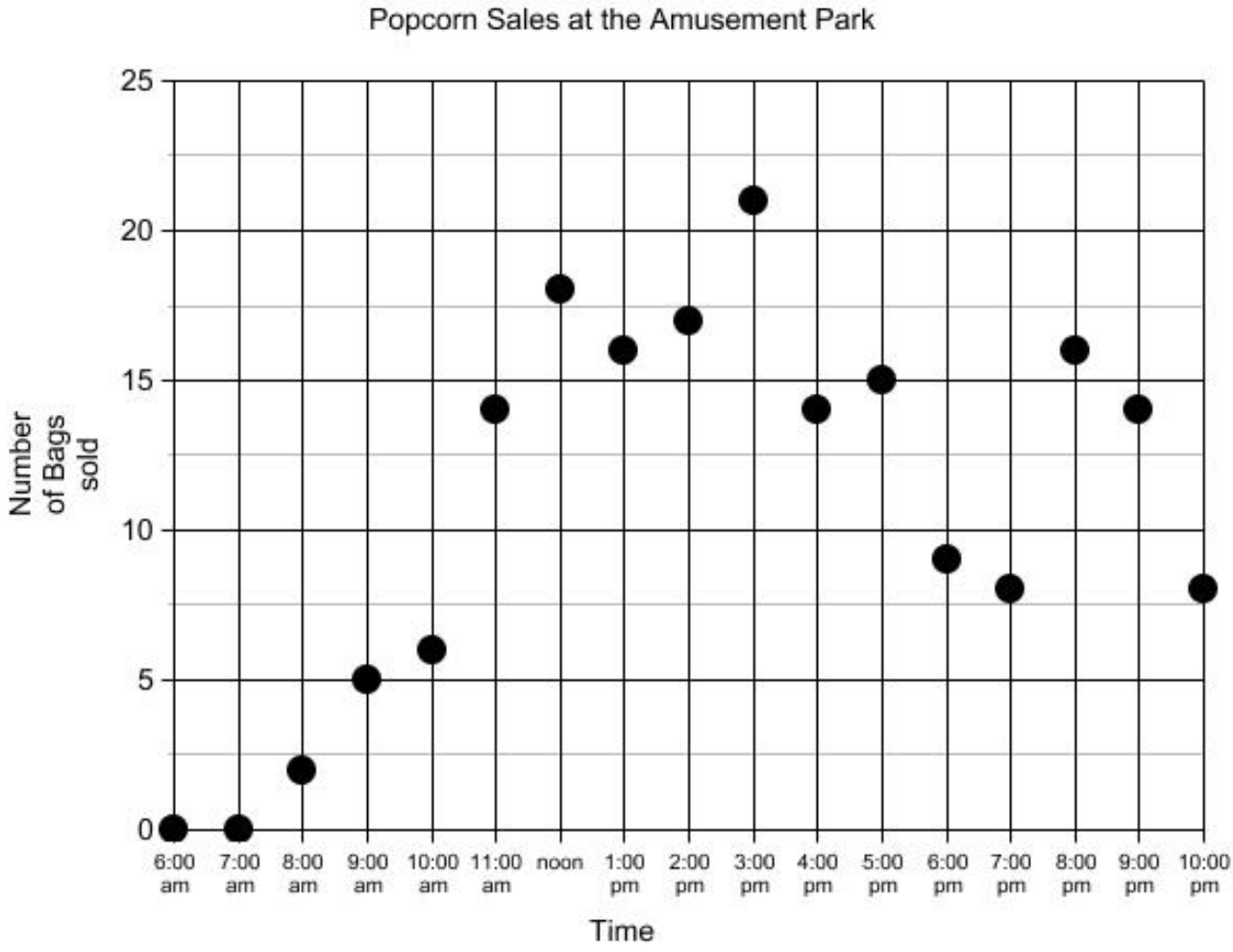
_____

_____

Name_____ Date _____

Mean, Median, Mode Word Grid

Situation	Mean	Median	Mode
Calculating your grade for a class			
Ordering jeans for the Gap			
The average age of people in a 6^{th} grade class when the teacher is included			


Popcorn Sales at the Amusement Park
Number of Bags sold
25
20
15
10
5
0
6:00 am
7:00 am
8:00 am
9:00 am
10:00 am
11:00 am
noon
1:00 pm
2:00 pm
3:00 pm
4:00 pm
5:00 pm
6:00 pm
7:00 pm
8:00 pm
9:00 pm
10:00 pm
Time

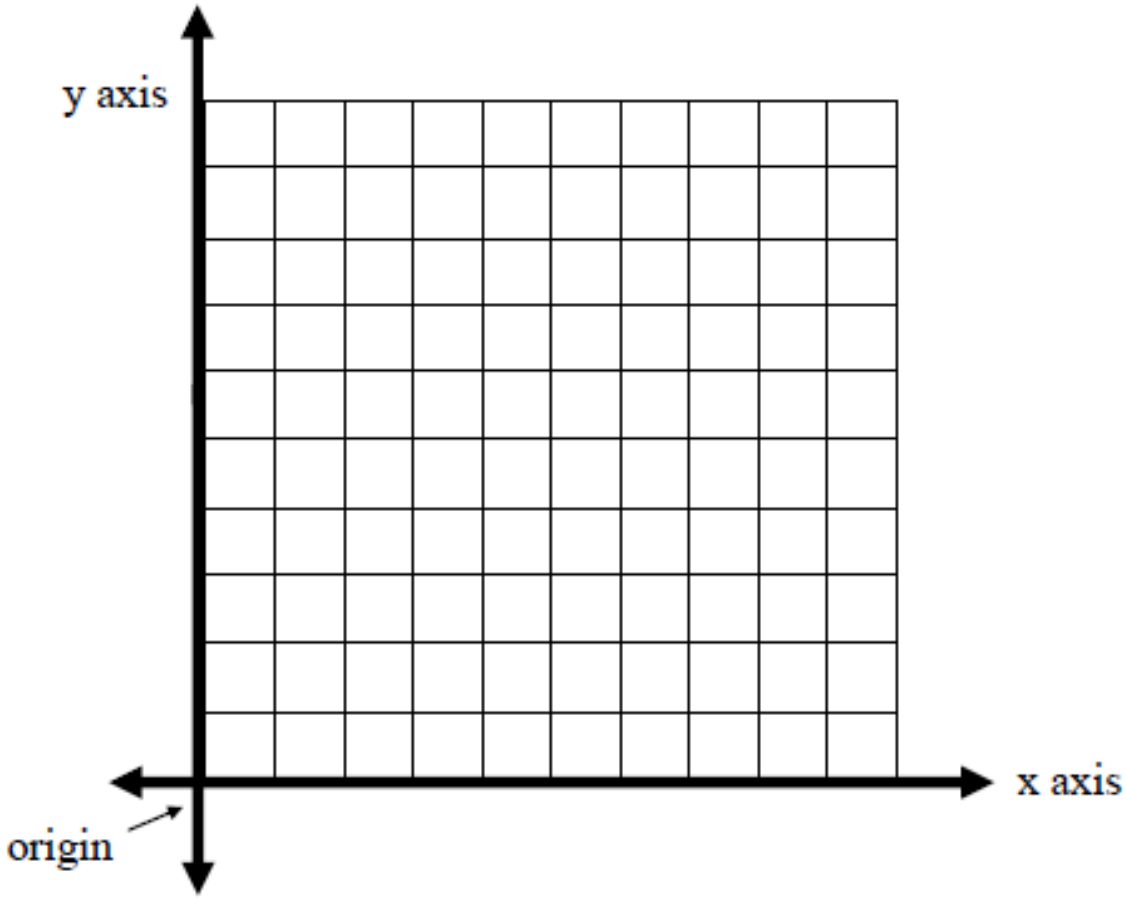
Name: _____ Date: _____

Input-Output Table

Complete the Input-Output Table.

input	output	ordered pair
0	0	(,)
1	4	(,)
2	8	(,)
3		(,)
4		(,)
5		(,)
10		(,)

Graph the data from the input-output table.



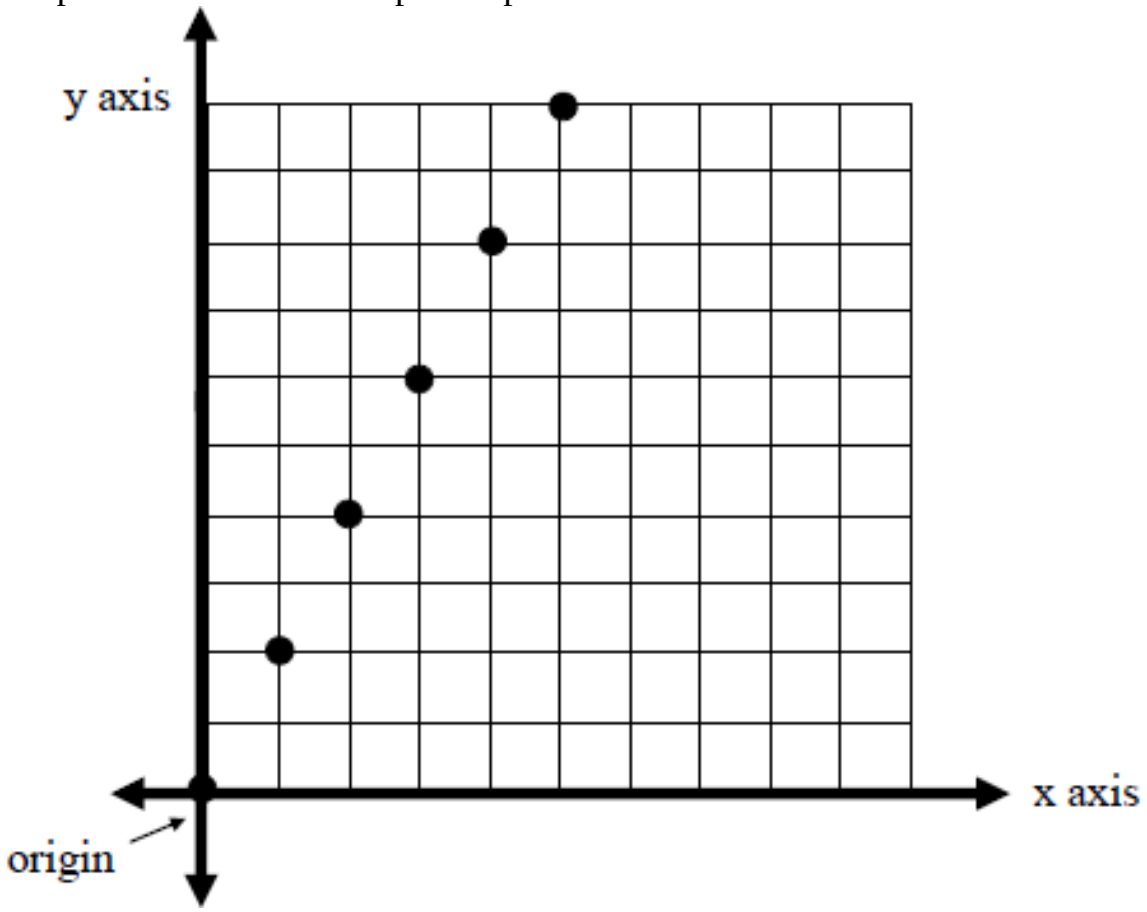
Name: _____ Date: _____

Input-Output Table

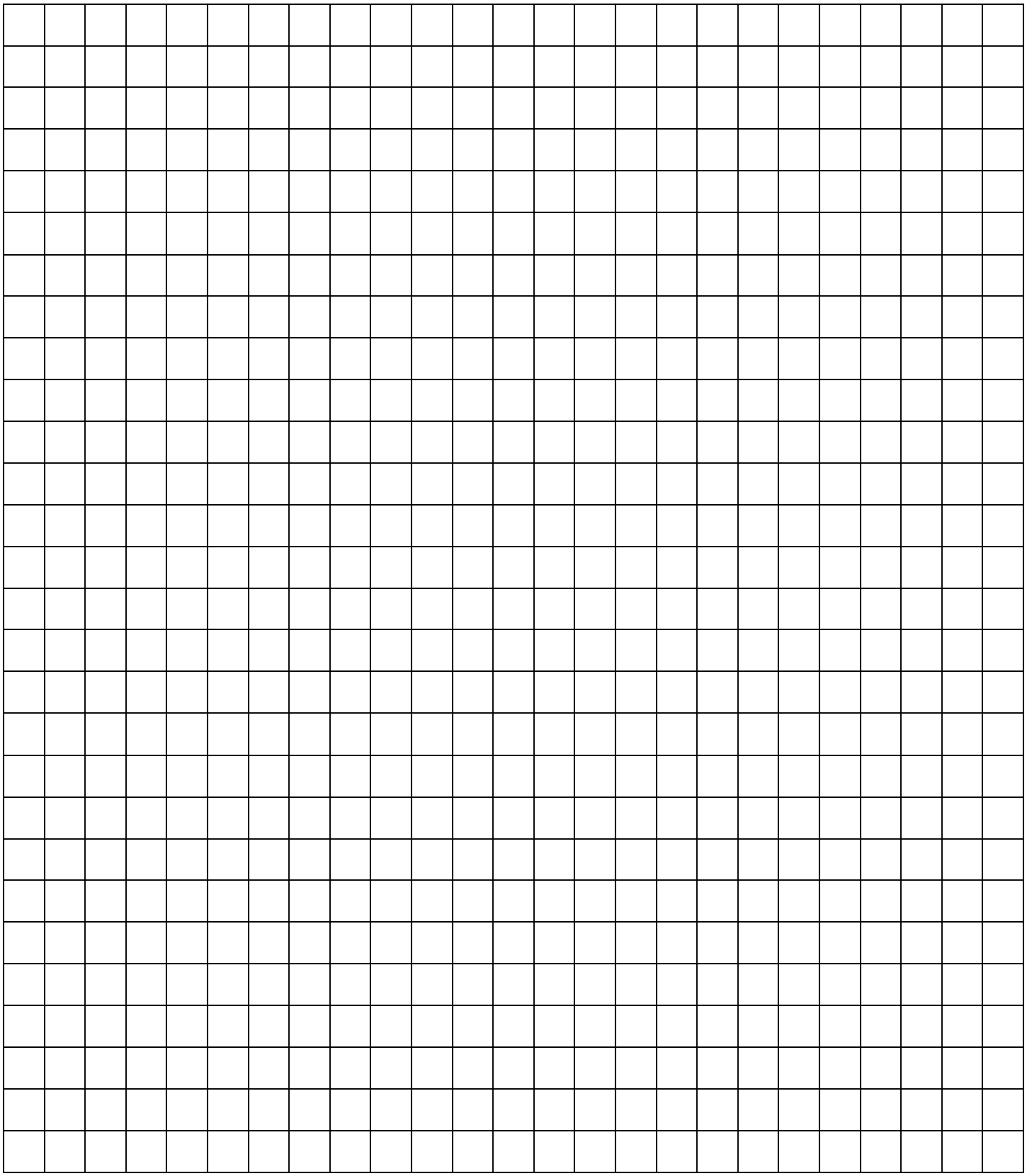
Complete the Input-Output Table.

input	output	ordered pair
0	0	(0, 0)
1	2	(1, 2)
2	4	(2, 4)
3	6	(3, 6)
4	8	(4, 8)
5	10	(5, 10)
10	20	(10, 20)

Graph the data from the input-output table.



Unit 1, Activities 7 and 9, Grid Paper



Name _____ Date _____

Examine the table, identify the pattern and find the missing data for each input-output table.

1. Identify the pattern for the number of quarts of water required to raise different numbers of goldfish in an aquarium.

# goldfish	1	2	3	5		15
# quarts of water	4	6		12	22	

Pattern_____

2. For a school project, Sara and her 3 friends made hair scrunchies to sell for $3 each. They were saving their money for a trip to Astroworld and started with $10. They need a total of $73 for the trip. Complete the table below to determine how many scrunchies they need to make and sell.

# scrunchies	0	1		10	15	
Amount of money			$16			$73

Pattern_____

Unit 1, Activity 8, What's My Pattern? with Answers

Examine the table, identify the pattern and find the missing data for each input-output table.

1. Identify the pattern for the number of quarts of water required to raise different numbers of goldfish in an aquarium.

# goldfish	1	2	3	5	*10*	15
# quarts of water	4	6	*8*	12	22	*32*

Pattern *double the number of goldfish and then add 2*

2. For a school project, Sara and her 3 friends made hair scrunchies to sell for $3 each. They were saving their money for a trip to Astroworld and started with $10. They need a total of $73 for the trip. Complete the table below to determine how many scrunchies they need to make and sell.

# scrunchies	0	1	*2*	10	15	*21*
Amount of money	*$10*	*$13*	$16	*$40*	*$55*	$73

Pattern *multiply the number by 3 and then add 10*

Name: _____ Date: _____

Scatter Plots Data Sheet

Student	Height in inches	Floor to waist in inches	length arm from bend of elbow to tip of pointer finger in inches	length of leg from back of knee to floor in inches

Name: _____ Date: _____

Anticipation Guide

Read each statement and decide if it is statistical or not statistical.

1. How old are you?
   _____ statistical _____ not statistical

2. How old are the students in our class in months?
   _____ statistical _____ not statistical

3. Number of throws made by Drew Brees in Sunday's game
   _____ statistical _____ not statistical

4. Number of throws completed and attempted by Drew Brees in each game last season
   _____ statistical _____ not statistical

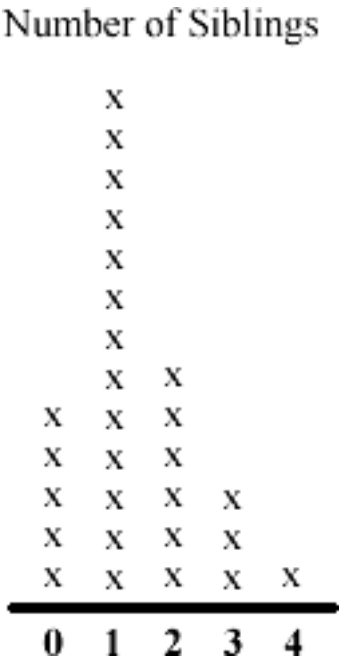
5. Do you text?
   _____ statistical _____ not statistical

6. Asking each student in the class if they text.
   _____ statistical _____ not statistical

7. How many siblings do you have?
   _____ statistical _____ not statistical

8. How many siblings do the students in our class have?
   _____ statistical _____ not statistical

Use the Line Plot to answer the following questions.



1. How many students are represented in the data?

2. What is the range of data? What does this value mean?

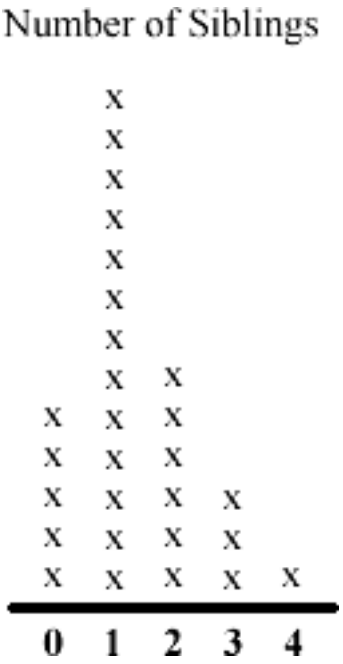
3. What is the mean of the data set?

4. What is the mode of the data set?

5. What is the median of the data set?

6. What do these values (mean, median, mode) mean?

Use the Line Plot to answer the following questions.



1. How many students are represented in the data? *28students*

2. What is the range of data? What does this value mean? *The range is 4. This means that the numbers are from 4 to 0.*

3. What is the mean of the data set? *The mean is 1.4.*

4. What is the mode of the data set? *The mode is 1.*

5. What is the median of the data set? *The median is 1.*

6. What do these values (mean, median, mode) mean? *The mean is the average, the mode is the number that occurs most often and the median is the middle number in the set of data.*

Name _____ Date _____

1. A ream of paper contains 500 sheets. If each student needs 20 sheets of paper to make a recording book, how many books can be made from a ream of paper?

   _____

2. There are 240 students in the sixth grade at W.W. Lewis Middle School. The sixth grade teachers have 2880 disks. If each of the students gets the same number of disks, how many disks will each student receive?

   _____

3. Mrs. Marcantel cut down an apple tree in her backyard and had a give-away celebration to get rid of 336 apples. She offered 24 apples to each person who asked. How many people could get free apples?

   _____

4. Mrs. Karam's math class sold 1620 cookies at the school's annual bake sale. The cookies were packaged to sell in boxes of three dozen cookies. How many boxes of cookies did they sell? Explain your thinking.

   _____

5. A factory has 5640 cassettes that will be packed into 47 cartons. How many cassettes will be placed in each carton?

   _____

6. Betty has 36 math books. The total number of pages in all of the math books is 4500 pages. How many pages are in each book? Explain your thinking.

   _____

Unit 2, Activity 1, Dividing with Answers

Name _____ Date _____

1. A ream of paper contains 500 sheets. If each student needs 20 sheets of paper to make a recording book, how many books can be made from a ream of paper?

   1 book = 20 sheets
   10 books = 200 sheets
   20 books = 400 sheets
   5 books = 100 sheets
   For 500 sheets, add 20 books + 5 books or 25 books.
   25 books can be made.

2. There are 240 students in the sixth grade at W.W. Lewis Middle School. The sixth grade teachers have 2880 disks. If each of the students gets the same number of disks, how many disks will each student receive?

   1 disk per student = 240 disks
   10 disks per student = 2400 disks
   2 disks per student = 480 disks
   For 2880 disks, add 10 disks per student + 2 disks per student
   Each student gets 12 computer disks.

3. Mrs. Marcantel cut down an apple tree in her backyard and had a give-away celebration to get rid of 336 apples. She offered 24 apples to each person who asked. How many people could get free apples if each person got 24 apples?

   1 person = 24 apples
   10 people = 240 apples
   4 people = 96 apples
   For 336 apples, add 10 people + 4 people.
   14 people got free apples.

4. Mrs. Karam's math class sold 1620 cookies at the school's annual bake sale. The cookies were packaged to sell in boxes of three dozen cookies. How many boxes of cookies did they sell? Explain your thinking.

   1 box = 36 cookies
   10 boxes = 360 cookies
   20 boxes = 720 cookies
   30 boxes = 1080 cookies
   40 boxes = 1440 cookies
   5 boxes = 180 cookies
   For 1620 cookies, add 40 boxes + 5 boxes.
   45 boxes of cookies were sold.

5. A factory has 5640 cassettes that will be packed into 47 cartons. How many cassettes will be placed in each carton if each carton contains the same amount?

   100 cassettes per carton = 4700 cassettes
   20 cassettes per carton = 940 cassettes
   For 5640 cassettes, add 100 cassettes per carton + 20 cassettes per carton.
   There are 120 cassettes in each carton.

6. Betty has 36 math books that each have the same number of pages. The total number of pages in all of the math books is 4500 pages. How many pages are in each book? Explain your thinking.

   100 pages per book = 3600 pages
   20 pages per book = 720 pages
   5 pages per book = 180
   For 4500 pages, add 100 pages per book, 20 pages per book, + 5 pages per book.
   There are 125 pages in each book.

The Remainder Game

1 2 3 4 5 6 7 8 9 10

10 11 12 13 14 15 16 17 18 19 20

STARTING #	**Division sentence/problem Example 12 ÷ 5 = 2 R 2**	**Player's Name/score**
100		
PLAYER 1 Total Score:	**PLAYER 2 Total Score :**	

Name _____ Date _____

Show all your work for each situation below. Express the remainder if any, in a variety of ways.

1. Kevin made 2314 birthday cards for the nursing home. If he puts 24 cards in each box, how many boxes of birthday cards does he have and how many will he have left over?

2. The animal shelter placed their stray dogs in a large pen with 12 dogs in each pen. There are 1218 stray dogs at the animal shelter. How many pens does the animal shelter need to house their stray dogs?

3. Mrs. Landry gave 72 of her math students crayons to complete their math project. She has 1024 crayons. If each student gets the same number of crayons, how many crayons will each student get?

4. The Church Bazaar sold 255 pies; each pie was cut in eight pieces. If 816 people each ate the same amount of pie, how many pieces of pie did each person get?

5. Mr. Guillory's electric bill showed that he used 2625 kilowatts for the month of August. How many kilowatts did he use each day if he uses approximately the same amount each day?

Unit 2, Activity 4, Remainders with Answers

Name _____ Date _____

Show all your work for each situation below. Express the remainder if any, in a variety of ways.

1. Kevin made 2314 birthday cards for the nursing home. If he puts 24 cards in each box, how many boxes of birthday cards does he have and how many will he have left over?

   96 boxes of cards and 10 cards left over

2. The animal shelter placed their stray dogs in a large pen with 12 dogs in each pen. There are 1218 stray dogs at the animal shelter. How many pens does the animal shelter need to house their stray dogs?

   102 pens (the last pen will have 6 dogs)

3. Mrs. Landry gave 72 of her math students crayons to complete their math project. She has 1024 crayons. If each student gets the same number of crayons, how many crayons will each student get?

   Each student will get 14 crayons and the teacher will have 16 left over.

4. The Church Bazaar sold 255 pies; each pie was cut in eight pieces. If 816 people each ate the same amount of pie, how many pieces of pie did each person get?

   Each person ate 2 ½ pieces of pie or each person ate 2 pieces with 408 slices left over.

5. Mr. Guillory's electric bill showed that he used 2625 kilowatts for the month of August. How many kilowatts did he use each day if he uses approximately the same amount each day?

   84.68 kilowatts per day

Name _____ Date _____

1. The sixth graders at your school are going on a field trip. There are 238 teachers, chaperones and students going on the trip. Everyone will be traveling by school bus. If each bus (excluding the bus driver) can seat a maximum of 45 people, how many buses will you need to transport everyone? Explain your answer.

2. Mrs. Morris is preparing for an open house for all the 6^{th} grade students in the school. The RSVP slips from parents have been counted, and 492 people will be coming. How many rows of chairs should be set up for the open house if there are 52 chairs per row? Explain your answer.

3. The carnival has 1539 prizes that are distributed in bags with 16 prizes in each bag. How many prize bags can be made? Explain your thinking.

4. The Red Ribbon Company makes one thousand twenty-nine red ribbons each day. If they work 12 hours a day, how many ribbons do they make in an hour?

5. One thousand ninety-seven scouts are going on a camping trip. Each tent will sleep no more than 24 scouts. How many tents will they need?

Name _____ Date _____

1. The sixth graders at your school are going on a field trip. There are 238 teachers, chaperones and students going on the trip. Everyone will be traveling by school bus. If each bus (excluding the bus driver) can seat a maximum of 45 people, how many buses will you need to transport everyone? Explain your answer.

   238 people ÷ 45 people = 5 groups of 45 people with 13 people left. You will need at least 6 buses to seat 238 people.

2, Mrs. Morris is preparing for an open house for all the 6^{th} grade students in the school. The RSVP slips from parents have been counted, and 492 people will be coming. How many rows of chairs should be set up for the open house if there are 52 chairs per row? Explain your answer.

   492 people ÷ 52 people = 9 rows of 52 people with 24 people left. You will need a minimum of 10 rows to seat everyone.

3. The carnival has 1539 prizes that are distributed in bags with the 16 prizes in each bag. How many prize bags can be made? Explain your thinking.

   1539 prizes ÷ 16 prizes = 96 groups of 16 prizes with 3 prizes left over. You will only be able to make 96 prize bags.

4. The Red Ribbon Company makes one thousand twenty-nine red ribbons each day. If they work 12 hours a day, how many ribbons do they make in an hour?

   1029 ribbons ÷ 12 hours = 85 remainder 9 ribbons per hour.

5. One thousand ninety-seven scouts are going on a camping trip. Each tent will sleep no more than 24 scouts. How many tents will they need?

   1097 scouts ÷ 24 scouts = 45 groups of 24 scouts with 17 scouts left over. You will need at least 46 tents.

I have 27. Who has 96 ÷ 24?	I have 4. Who has 204 ÷ 12?
I have 17. Who has 340 ÷ 68?	I have 5. Who has 448 ÷ 28?
I have 16. Who has 28 divided by 4?	I have I have 7. Who has 1250 ÷ 25?
I have 50. Who has 2000 ÷ 10?	I have 200. Who has 460 ÷ 10?

I have 46. Who has 5640 ÷ 23?	I have 245 with remainder of 5. Who has 4050 ÷ 50?
I have 81. Who has 2880 ÷ 24?	I have 120. Who has 1205 ÷ 5?
I have 241. Who has 208 ÷ *8*?	I have 26. Who has 280 ÷ 14?
I have 20. Who has 90 ÷ 6?	I have 15. Who has 120 ÷ 3?

I have 40. Who has 448 ÷ 14?	I have 32. Who has 11880 ÷ 90?
I have 132. Who has 272 ÷ 8?	I have 34. Who has 900 ÷ 12?
I have 75. Who has 504 ÷ 8?	I have 63. Who has 6936 ÷ 6?
I have 1156. Who has 9810 ÷ 90?	I have 109. Who has 8597 ÷ 37?

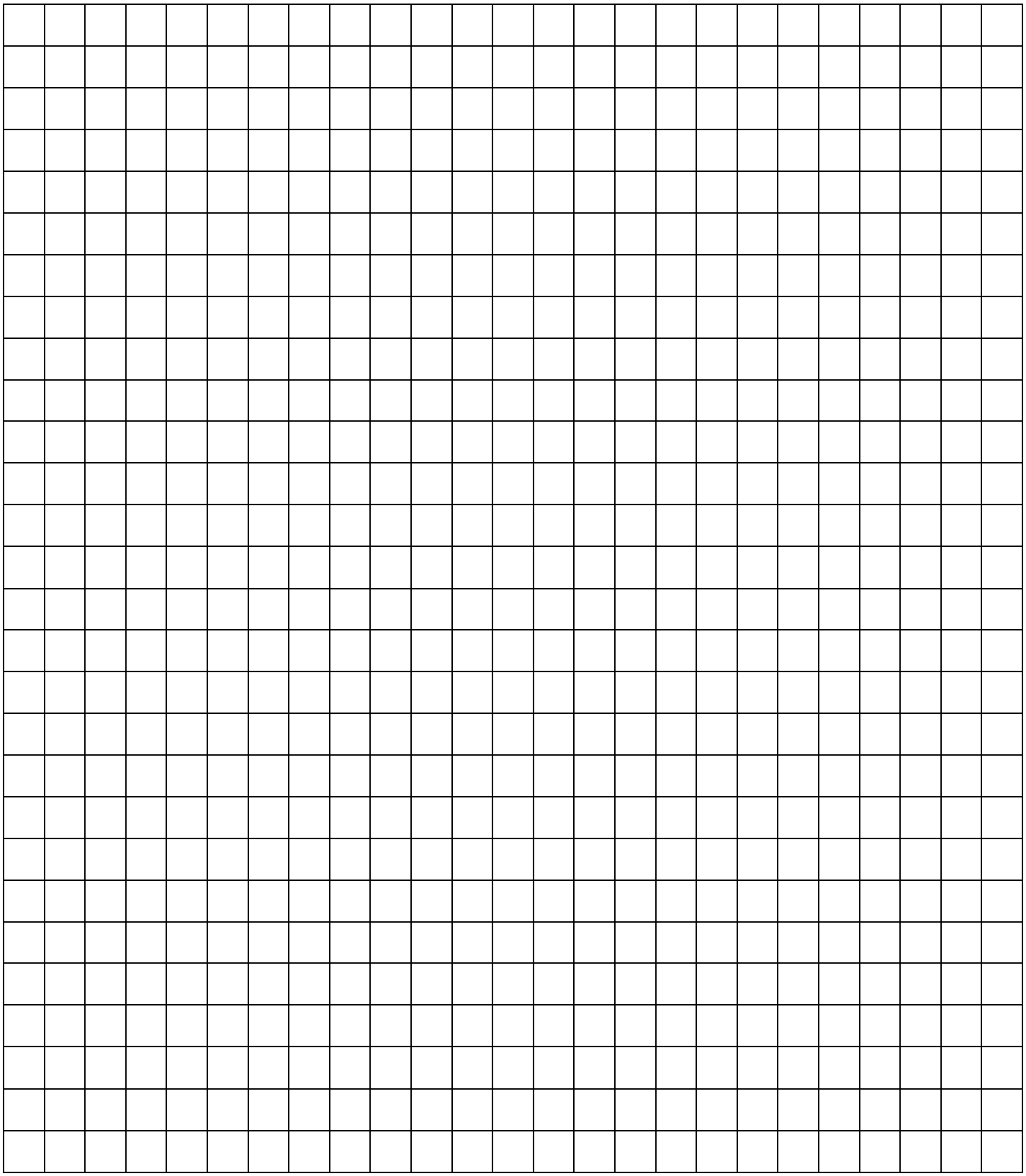
I have 232 remainder 13. Who has 5244 ÷ 69?	I have 76. Who has 8888 ÷ 22?
I have 404. Who has 6560 ÷ 20?	I have 328. Who has 2520 ÷ 90?
I have 28. Who has 650 ÷ 50?	I have 13. Who has 486 ÷ 18?

Name: _____ Date: _____

Rate your understanding of each word.

\+ means understand well
✓ means some understanding
– means don't know

Word/Phrase	+	✓	–	**Example**	**Definition**
Greatest Common Factor (GCF)					
Least Common Multiple (LCM)					
Denominator					
Numerator					
Equivalent Fractions					
Integer					
Ratio					
Proportion					
Percent					



Name _____ Date _____

Find the greatest common factor for each set of numbers.

1. 6, 24 _____
2. 12, 32 _____
3. 30, 90 _____
4. 15, 24 _____
5. 32, 64 _____

Name _____ Date _____

Find the greatest common factor for each set of numbers.

1. 6, 24 6
2. 12, 32 4
3. 30, 90 30
4. 15, 24 3
5. 32, 64 32

Name _____ Date _____

Find the least common multiple for each set of numbers.

1. 6, 10 _____

2. 2, 12 _____

3. 3, 9 _____

4. 5, 12 _____

5. 6, 8 _____

Name _____ Date _____

Find the least common multiple for each set of numbers.

1. 6, 10 30
2. 2, 12 12
3. 3, 9 9
4. 5, 12 60
5. 6, 8 24

Unit 3, Activity 4, Finding LCM

Name _____ Date _____

1. DJ 100 gives away a $100 bill for every 100th caller. Every 30th caller receives free concert tickets. How many callers must get through before one of them receives *both* a $100 and a concert ticket?

2. Two bikers are riding a circular path. The first rider completes a round in 12 minutes. The second rider completes a round in 18 minutes. If they both started at the same place and time and go in the same direction, after how many minutes will they meet again at the starting point?

3. Two ferry boats leave the dock at the same time. One of the boats returns to the dock every 25 minutes. The other ferry boat returns every 30 minutes. How long will it be before the ferry boats return to the dock at the same time?

4. Matthew goes hiking every 12 days and swimming every 6 days. He did both kinds of exercise today. How many days from now will he go both hiking and swimming again?

5. Jenny wears her Khaki shorts every 6 days and her polka dot shirt every 10 days. If she wore them both on May 1st, when will she wear them both on the same day again?

Unit 3, Activity 4, Finding LCM with Answers

Name _____ Date _____

1. DJ 100 gives away a $100 bill for every 100th caller. Every 30th caller receives free concert tickets. How many callers must get through before one of them receives *both* a $100 and a concert ticket?

   100: 100 ÷ 2, 50 ÷ 2, 25 ÷ 5, 5 ÷ 5 2, 2, 5, 5
   30: 30 ÷ 2, 15 ÷ 3, 5 ÷ 5 2, 3, 5
   LCM = 2 × 2 × 3 × 5 × 5 = 300

   Every 300th caller will receive $100 and concert tickets.

2. Two bikers are riding a circular path. The first rider completes a round in 12 minutes. The second rider completes a round in 18 minutes. If they both started at the same place and time and go in the same direction, after how many minutes will they meet again at the starting point?

   12: 12 ÷ 2, 6 ÷ 2, 3 ÷ 3 2, 2, 3
   18: 18 ÷ 2, 9 ÷ 3, 3 ÷ 3 2, 3, 3
   LCM = 2 × 2 × 3 × 3 = 36

   Both riders will meet again at the starting point in 36 minutes.

3. Two ferry boats leave the dock at the same time. One of the boats returns to the dock every 25 minutes. The other ferry boat returns every 30 minutes. How long will it be before the ferry boats return to the dock at the same time?

   25: 25 ÷ 5, 5 ÷ 5 5, 5
   30: 30 ÷ 2, 15 ÷ 3, 5 ÷ 5 2, 3, 5
   LCM = 2 × 3 × 5 × 5 = 150

   Both ferry boats will be at the dock every 150 minutes.

4. Matthew goes hiking every 12 days and swimming every 6 days. He did both kinds of exercise today. How many days from now will he go both hiking and swimming again?

   12: 12 ÷ 2, 6 ÷ 2, 3 ÷ 3 2, 2, 3
   6: 6 ÷ 2, 3 ÷ 3 2, 3
   LCM = 2 × 2 × 3 = 12

   Matthew will hike and swim in the same day again in 12 days.

5. Jenny wears her Khaki shorts every 6 days and her polka dot shirt every 10 days. If she wore them both on May 1st, when will she wear them both on the same day again?

   10: 10 ÷ 2, 5 ÷ 5 2, 5
   6: 6 ÷ 2, 3 ÷ 3 2, 3
   LCM = 2 × 3 × 5 = 30

   Jenny will wear her khaki shorts with her polka dot shirt again on May 31st.

Name _____ Date _____

Solve.

1. A florist has 36 roses and 27 tulips she must use to create bouquets. What is the largest number of bouquets she can make without having any flowers left over?

2. Suppose you have 60 pencils and 90 pens and you want to make packages of pencils and pens to donate to your school for students who cannot afford these supplies. What is the maximum number of packages you can make using all items, and how many pencils and pens will be in each package?

3. During the summer months, one ice cream truck visits Jeannette's neighborhood every 4 days and another ice cream truck visits her neighborhood every 5 days. If both trucks visited today, when is the next time both trucks will visit on the same day?

4. Mrs. Hernandez waters one of her plants every 3 days and another plant every 7 days. If she waters both plants today, when is the next time both plants will be watered on the same day?

Name _____ Date _____

Solve.

1. A florist has 36 roses and 27 tulips she must use to create bouquets. What is the largest number of bouquets she can make without having any flowers left over?

   Roses: 1, 2, 3, 4, 6, 9, 12, 18, 36
   Tulips: 1, 3, 9, 27
   The GCF is 9 so the florist can make 9 bouquets.

2. Suppose you have 60 pencils and 90 pens and you want to make packages of pencils and pens to donate to your school for students who cannot afford these supplies. What is the maximum number of packages you can make using all items, and how many pencils and pens will be in each package?

   Pencils: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
   Pens: 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90
   You could make 30 packages. Each package would have 2 pencils and 3 pens.

3. During the summer months, one ice cream truck visits Jeannette's neighborhood every 4 days and another ice cream truck visits her neighborhood every 5 days. If both trucks visited today, when is the next time both trucks will visit on the same day?

   4 *– 4, 8, 12, 16, 20, 24*
   5 *– 5, 10, 15, 20, 25*
   It will be 20 days before both trucks visit on the same day again.

4. Mrs. Hernandez waters one of her plants every 3 days and another plant every 7 days. If she waters both plants today, when is the next time both plants will be watered on the same day?

   3 *– 3, 6, 9, 12, 15, 18, 21, 24, 27, 30*
   7 *– 7 ,14, 21*
   It will be 21 days before both plants are watered on the same day again.

Name _____ Date _____

50 Meter Freestyle	
Athlete	Time (seconds)
A. Addison	26.99
B. Bier	27.03
B. Blalock	27.42
G. Gunter	26.74
H. Harper	26.73
K. Knight	27.48
R. Riddell	26.99
S. Stelly	26.51
T. Thompson	27.10

1. Who won the race?

2. Who came in last place?

3. Rank the swimmers in order from first to last.

4. Write three comparison statements comparing the times.

5. Write each of the comparisons in number 4 using symbols.

Name _____ Date _____

50 Meter Freestyle	
Athlete	Time (seconds)
A. Addison	26.99
B. Bier	27.03
B. Blalock	27.42
G. Gunter	26.74
H. Harper	26.73
K. Knight	27.48
R. Riddell	26.99
S. Stelly	26.51
T. Thompson	27.10

1. Who won the race? *S. Stelly*

2. Who came in last place? *K. Knight*

3. Rank the swimmers in order from first to last.
   1^{st} -S. Stelly 2^{nd} – H. Harper 3^{rd} – G. Gunter 4^{th} – A. Addison and R. Riddell 6^{th} – B. Bier 7^{th} – T. Thompson 8^{th} – B. Blalock 9^{th} – K. Knight

4. Write three comparison statements comparing the times. *Answers will vary*
   Sample answers: 26.99 is a longer amount of time than 26. 51, 27.10 is a shorter amount of time than 27.42, 26. 51 is a shorter amount of time than 26.99

5. Write each of the comparisons in number 4 using symbols. Answers will vary.
   Sample answers: 26.99 > 26.51, 27.10 < 27.42, 25.51 < 26.99

Unit 3, Activity 10, Ratio Notes

Name _____ Date _____

A **ratio** is a comparison of two quantities.

1. A ratio can compare a part to a _____ or a part to a _____.

Part to Part

2. John has 4 CDs for every 7 DVDs. Ratio is = _____

3. Sally has 9 DVDs for every 6 CDs. Ratio is = _____

Part to Whole

Stacey has a total of 25 CDs and DVDs. In her music collection, there are 7 CDs.

4. What is the ratio of CDs to the total? _____

5. What is the ratio of DVDs to the total? _____

6. What is the ratio of DVDs to CDs? _____

7. What is the ratio of CDs to DVDs? _____

8. How are these ratios alike?

9. How are they different?

10. Are they equivalent?

Equivalent Ratios

$$\frac{3}{5} = \frac{6}{10} = \frac{12}{20}$$

1	2	3	4	5	6
4	8	12	16	20	24

Try it!

11. Find two ratios equivalent to $\frac{2}{3}$. _____

Complete the ratio table.

2	4	6	**a**	10	12
6	12	18	24	30	**b**

12. _____

13. _____

Proportions

There are 12 teachers and 288 students at Gator Middle School. There are 15 teachers and 360 students at Eagle Middle School.

14. Are the ratios of teachers to students at the two schools equal? _____

Unit 3, Activity 10, Ratio Notes with Answers

Name _____ Date _____

A **ratio** is a comparison of two quantities.

1. A ratio can compare a part to a <u>part</u> or a part to a <u>whole</u>.

Part to Part

2. John has 4 CDs for every 7 DVDs. Ratio is = <u>4:7, 4 to 7, or 4/7</u>

3. Sally has 9 DVDs for every 6 CDs. Ratio is = <u>9:6, 9 to 6, 9/6</u>

Part to Whole

Stacey has a total of 25 CDs and DVDs. In her music collection, there are 7 CDs.

4. What is the ratio of CDs to the total? <u>7 to 25</u>

5. What is the ratio of DVDs to the total? <u>18 to 25</u>

6. What is the ratio of DVDs to CDs? <u>18 to 7</u>

7. What is the ratio of CDs to DVDs? <u>7 to 18</u>

8. How are these ratios alike? <u>The first 2 ratios are both part to whole ratios.</u>

9. How are they different? <u>The third and fourth ratios are both part to part ratios.</u>

10. Are they equivalent? <u>None of the ratios are equivalent because they are all comparing different things.</u>

Equivalent Ratios

$$\frac{3}{5}=\frac{6}{10}=\frac{12}{20}$$

1	2	3	4	5	6
4	8	12	16	20	24

Try it!

11. Find two ratios equivalent to $\frac{2}{3}$. <u>Answers will vary</u>

Complete the ratio table.

2	4	6	**a**	10	12
6	12	18	24	30	**b**

12. 8
13. 36

Proportions

There are 12 teachers and 288 students at Gator Middle School. There are 15 teachers and 360 students at Eagle Middle School.

14. Are the ratios of teachers to students at the two schools equal?

The ratio of teachers to students at Gator Middle School is 12 to 288. The ratio of teachers to students at Eagle Middle School is 15 to 360.

$\frac{12}{288} = \frac{1}{24}$ $\frac{15}{360} = \frac{1}{24}$ *Since both ratios simplify to* $\frac{1}{24}$ *they are equal.*

Name _____ Date _____

1. Sue got 8 out of 10 questions correct on her test. What type of ratio is 8:10?
2. It rained 3 out of the 4 days we were on vacation. What type of ratio is 3:1?

Grade	**Boys**	**Girls**
5th	75	80
6th	100	62
7th	80	68

3. Use the information from the table to write 4 ratios.

4. Complete the ratio table

5	10	15	20	**a**	30
35	70	**b**	140	175	210

a. _____

b. _____

5. Are the ratios 3 to 4 and 6:8 proportional? Explain your reasoning.

6. Are the ratios 7:1 and 4:28 proportional? Explain your reasoning.

Unit 3, Activity 10, Ratio Practice with Answers

Name _____ Date _____

1. Sue got 8 out of 10 questions correct on her test. What type of ratio is 8:10? *Part to whole*

2. It rained 3 out of the 4 days we were on vacation. What type of ratio is 3:1? *Part to part*

Grade	**Boys**	**Girls**
5th	75	80
6th	100	62
7th	80	68

3. Use the information from the table to write 4 ratios.

Answers will vary

4. Complete the ratio table

5	10	15	20	**a**	30
35	70	**b**	140	175	210

a. 25

b. 105

5. Are the ratios 3 to 4 and 6:8 proportional? Explain your reasoning. *Yes*

6. Are the ratios 7:1 and 4:28 proportional? Explain your reasoning. *no*

We won 17 games and lost 3	Our class has 12 girls out of 30 students	5 out of 10 students know Spanish	It snowed 10 out of 15 days
It was cloudy 5 days and sunny 2 days	We have 3 cats and 4 dogs	4 fish for every turtle	10 black marbles and 4 red marbles
1 circle to 5 squares	16 ducks to 7 geese	256 miles to 8 gallons	13 blue shirts to 11 white shirts

Name _____ Date _____

Determine if each ratio is part to part or part to whole. Then solve.

1. Jenny attended 18 out of 25 tutoring sessions. What percent of the tutoring sessions did she attend?

2. Jack received 31 out of 50 votes for student council president. What percent of the votes did Jack receive?

3. 3 out of 5 teenagers prefer barbeque chips. What percent of teenagers prefer barbeque chips?

4. People preferring cheesy puffs outnumbered those who prefer tortilla chips by a ratio of 7 to 3. What percent of people prefer tortilla chips?

5. This year the basketball team won 20 games and lost 5. What percent of the games did the team win?

Name _____ Date _____

Determine if each ratio is part to part or part to whole. Then answer the question.

1. Jenny attended 18 out of 25 tutoring sessions. What percent of the tutoring sessions did she attend?

   part to whole ratio *18 of 25* $\frac{18\times4}{25\times4}=\frac{72}{100}$ *72 out of 100 equals 72%.*

   Jenny attended 72% of the tutoring sessions.

2. Jack received 31 out of 50 votes for student council president. What percent of the votes did Jack receive?

   part to whole ratio $\frac{31}{50}$ $\frac{31\times2}{50\times2}=\frac{62}{100}$ *62 out of 100 equals 62%.*

   Jack received 62% of the vote for student council president.

3. 3 out of 5 teenagers prefer barbeque chips. What percent of teenagers prefer barbeque chips?

   p*art to whole ratio* 3:5 $\frac{3\times20}{5\times20}=\frac{60}{100}$ 60 out of 100 equals 60%.

   60% of teenagers prefer barbeque chips.

4. People preferring cheesy puffs outnumbered those who prefer tortilla chips by a ratio of 7 to 3. What percent of people prefer tortilla chips?

   part to part ratio *7: 3*

   part to whole ratio *3:10* $\frac{3\times10}{10\times10}=\frac{30}{100}$ *30 out of 100 equals 30%.*

   30% of the people surveyed prefer tortilla chips.

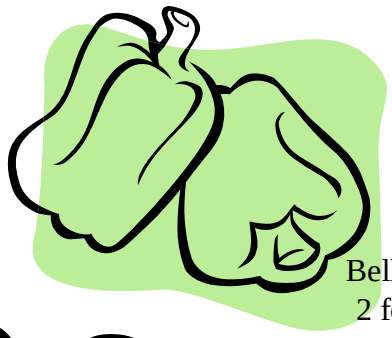
5. This year the basketball team won 20 games and lost 5. What percent of the games did the team win?

   part to part ratio *20:5*

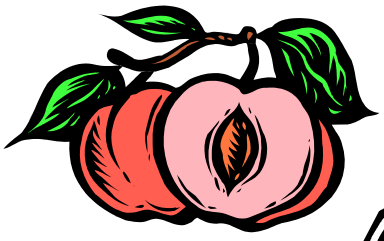
   part to whole ratio *20:25* $\frac{20\times4}{25\times4}=\frac{80}{100}$ *80 out of 100 equals 80%.*

   The basketball team won 80% of their games.

Watermelon
$4.99

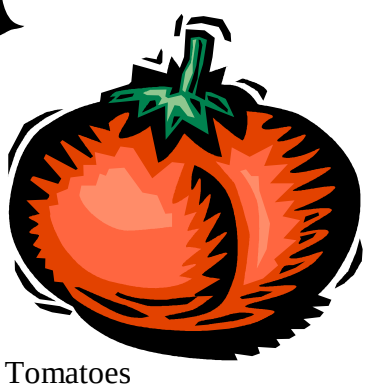


Bell Peppers
2 for $1.00

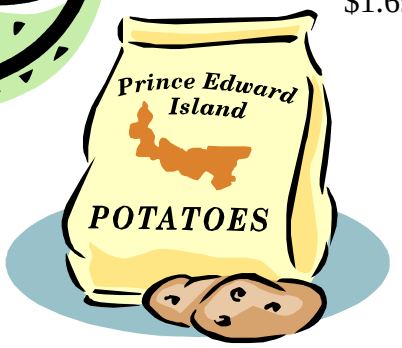


Peaches
$1.69 lb.

Corn
6 for $1.98



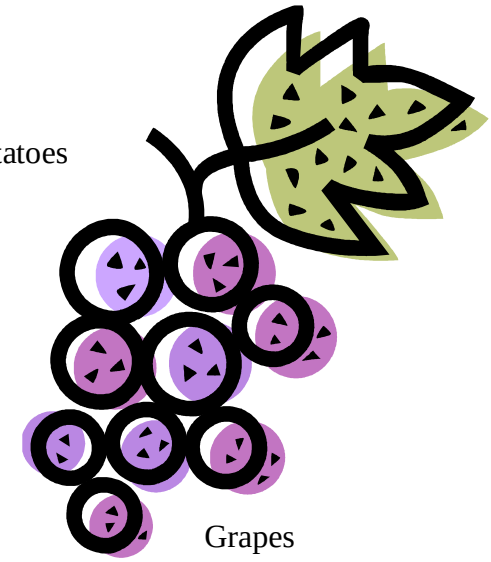
Tomatoes
$1.29 lb.



5 lb. bag of potatoes
$2.99

3 lb. bag of onions
$1.69

Apples
$1.19 lb.



Grapes
$0.99 lb.

Unit 3, Activity 12, Rates

Name _____ Date _____

1. Jack's car can be driven 480 miles with 15 gallons of gasoline. Make a rate table showing the number of miles his car can be driven with 1, 2, 3, … 10 gallons of gas.

Gallons of gas	1	2	3	4	5	6	7	8	9	10
Miles driven										

Choose whether each is an example of a *rate* or a *unit rate*.

2. My new car gets 23 miles per gallon on the highway! _____

3. Nola Cola is on sale, six for $2.50! _____

4. DVDs are on sale, 5 for $44.95! _____

5. Ice cream sandwiches cost $.50 each! _____

Solve the following problems:

6. The local bakery has cupcakes on sale, $3.00 for 2 cupcakes. You have $20. How many can you buy? (Tax not included.)

7. Jack and Jill were driving at a constant rate along a hilly country road. Jack drove 5 miles in 15 minutes. How far did he drive in 6 minutes?

8. A chocolate chip cookie cake has about 175 calories for 35 grams of cookie cake. Christy ate 50 grams of cookie cake, how many calories was this?

9. CD's are on sale at The Rock Shop, 5 for $65. How much does each CD cost? Show your work.

10. At The Pop Shop, CD's are on sale, 4 for $50. Who has the best buy, The Pop Shop or The Rock Shop? Show your work.

Unit 3, Activity 12, Rates with Answers

Name _____ Date _____

1. Jack's car can be driven 480 miles with 15 gallons of gasoline. Make a rate table showing the number of miles his car can be driven with 1, 2, 3, … 10 gallons of gas.

Gallons of gas	1	2	3	4	5	6	7	8	9	10
Miles driven	*32*	*64*	*96*	*128*	*160*	*192*	*224*	*256*	*288*	*320*

Choose whether each is an example of a *rate* or a *unit rate*.

2. My new car gets 23 miles per gallon on the highway! *unit rate*

3. Nola Cola is on sale, six for $2.50! *rate*

4. DVDs are on sale, 5 for $44.95! *rate*

5. Ice cream sandwiches cost $.50 each! *unit rate*

Solve the following problems:

6. The local bakery has cupcakes on sale, $3.00 for 2 cupcakes. You have $20. How many can you buy? (Tax not included.) *Cupcakes are $1.50 each. 20 ÷ 1.5 = 13.333 You can buy 13 cupcakes.*

7. Jack and Jill were driving at a constant rate along a hilly country road. Jack drove 5 miles in 15 minutes. How far did he drive in 6 minutes? *It takes Jack 3 minutes to drive a mile, so in 6 minutes he can drive 2 miles.*

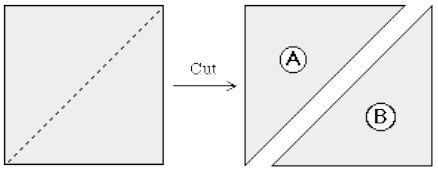
8. A chocolate chip cookie cake has about 175 calories for 35 grams of cookie cake. Christy ate 50 grams of cookie cake, how many calories was this? *175 ÷ 35 = 5 Each gram of cookie cake is 5 calories, so 50 grams of cookie cake would be 250 calories.*

9. CD's are on sale at The Rock Shop, 5 for $65. How much does each CD cost? Show your work. *65 ÷ 5 = 13 The CD's cost $13 each.*

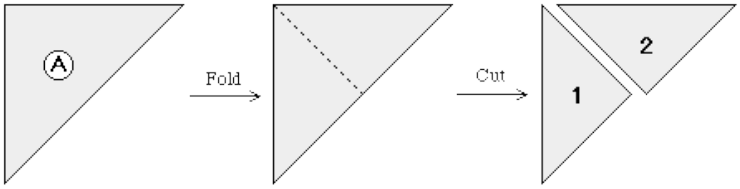
10. At The Pop Shop, CD's are on sale, 4 for $50. Who has the best buy, The Pop Shop or The Rock Shop? Show your work. *50 ÷ 4 = 12.50 The CD's cost $12.50 each. The Pop Shop is a better deal.*

Fold and cut a square sheet of paper by following these instructions:

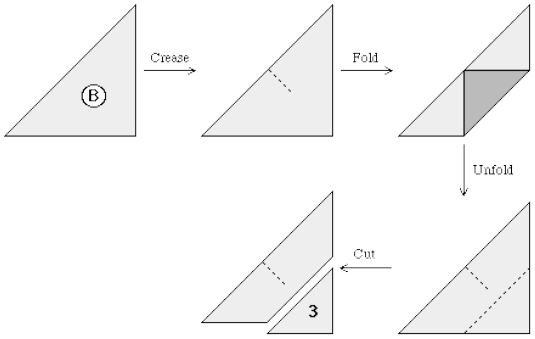
1. Fold the square in half diagonally, unfold, and cut along the crease into two congruent triangles.



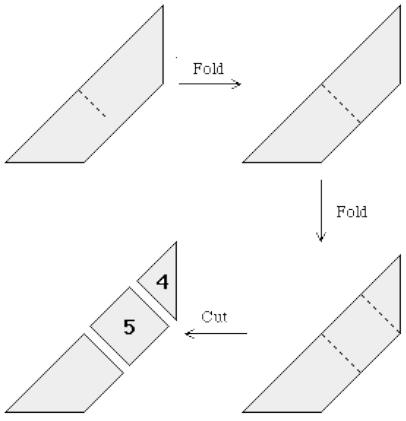
2. Take one of these triangles. Fold in half, unfold, and cut along the crease. Set both of these triangles aside.



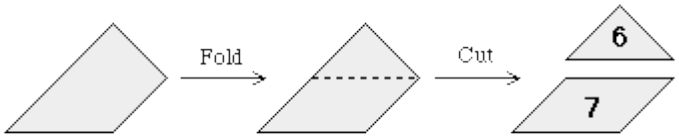
3. Take the other large triangle. Lightly crease to find the midpoint of the longest side. Fold so that the vertex of the right angle touches that midpoint, unfold and cut along the crease. You will have formed a middle-sized triangle and a trapezoid. Set the middle-sized triangle aside with the two large-size triangles.



4. Take the trapezoid, fold it in half, unfold, and cut. To create a square and a small-sized triangle from one of the trapezoid halves, fold the acute base angle to the adjacent right base angle and cut on the crease. Place these two shapes aside.



5. To create a parallelogram and a small-sized triangle, take the other trapezoid half. Fold the right base angle to the opposite obtuse angle, crease, unfold, and cut. Place these two shapes aside.



6. You should have the 7 tangram pieces:
   2 large congruent triangles
   1 middle-sized triangle
   2 small congruent triangles
   1 parallelogram
   1 square

7. The pieces may now be arranged in many shapes. Try recreating the original square.

Name _____ Date _____

We're going on a road trip! Use the resources provided to plan your trip.

Our destination is: _____

Use the resources provided to estimate the distance to your destination.

The distance to our destination is: _____

If it takes you 5 hours to travel to your destination, approximately how many miles would you travel per hour (mph)? _____

Is that a reasonable speed to travel? Why or why not? _____

_____

_____

If not, what would be a reasonable amount of time to get to your destination? _____

If you used 8 gallons of gas on the way to your destination, how many miles per gallon (mpg) does your car get?_____

_____

Explain how you calculated the miles per gallon (mpg). _____

_____

_____

Unit 4, Activity 1, Landscaping

Name _____ Date _____

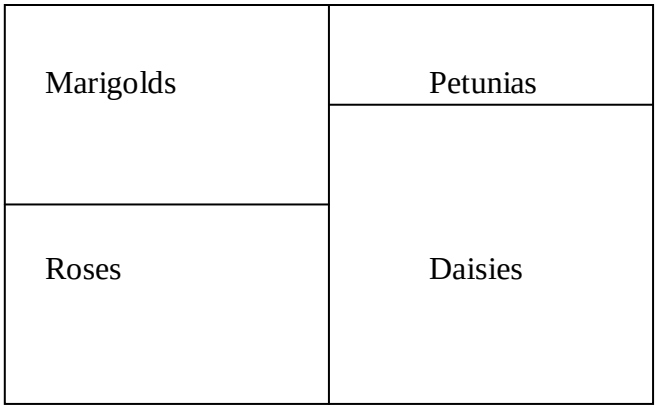
Have students work in small groups to sketch the following problem. Grid paper is available if you want to use it.

1) A local business has given your class 36 white, 90 pink, and 54 hybrid azaleas for the garden. Each row will have the same number of plants with no mixing of colors. Sketch all possible arrangements.

a) What is the greatest number of azaleas that could be put in each row?

b) Using the answer to part a, what fractional part of the garden is made up of each of the three types of azaleas?

2) Use the following diagram to write a situation that can be represented by this diagram. Write the fractional part represented with each type of flower. The picture is drawn to scale.



Unit 4, Activity 1, Landscaping with Answers

Have students work in small groups to sketch the following problem. Grid paper is available if you want to use it.

1) A local business has given your class 36 white, 90 pink, and 54 hybrid azaleas for the garden. Each row will have the same number of plants with no mixing of colors. Sketch all possible arrangements.

Factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, 36
Factors of 54 are 1, 2, 3, 6, 9, 18, 27, 54
Factors of 90 are 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90

Common factors are 1, 2, 3, 6, 9, and 18 so the plants can be planted in rows of 1, 2, 3, 6, 9 or 18.

Here is an example with 18 plants per vertical row. W = white P = pink H = hybrid

W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H
W	W	P	P	P	P	P	H	H	H

a) What is the greatest number of azaleas that could be put in each vertical row?

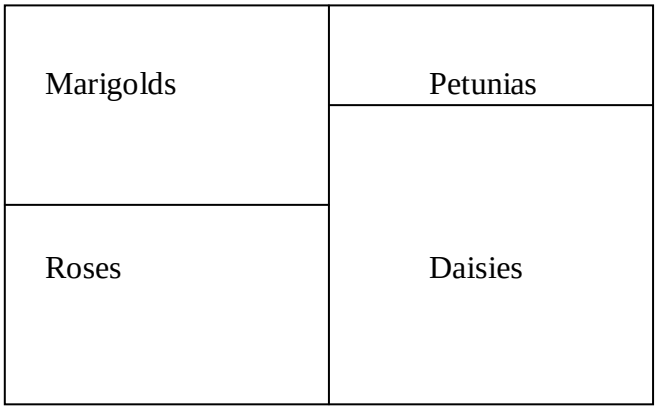
18 azaleas per vertical row

b) Using the answer to part a, what fractional part of the garden is made up of each of the three types of azaleas?

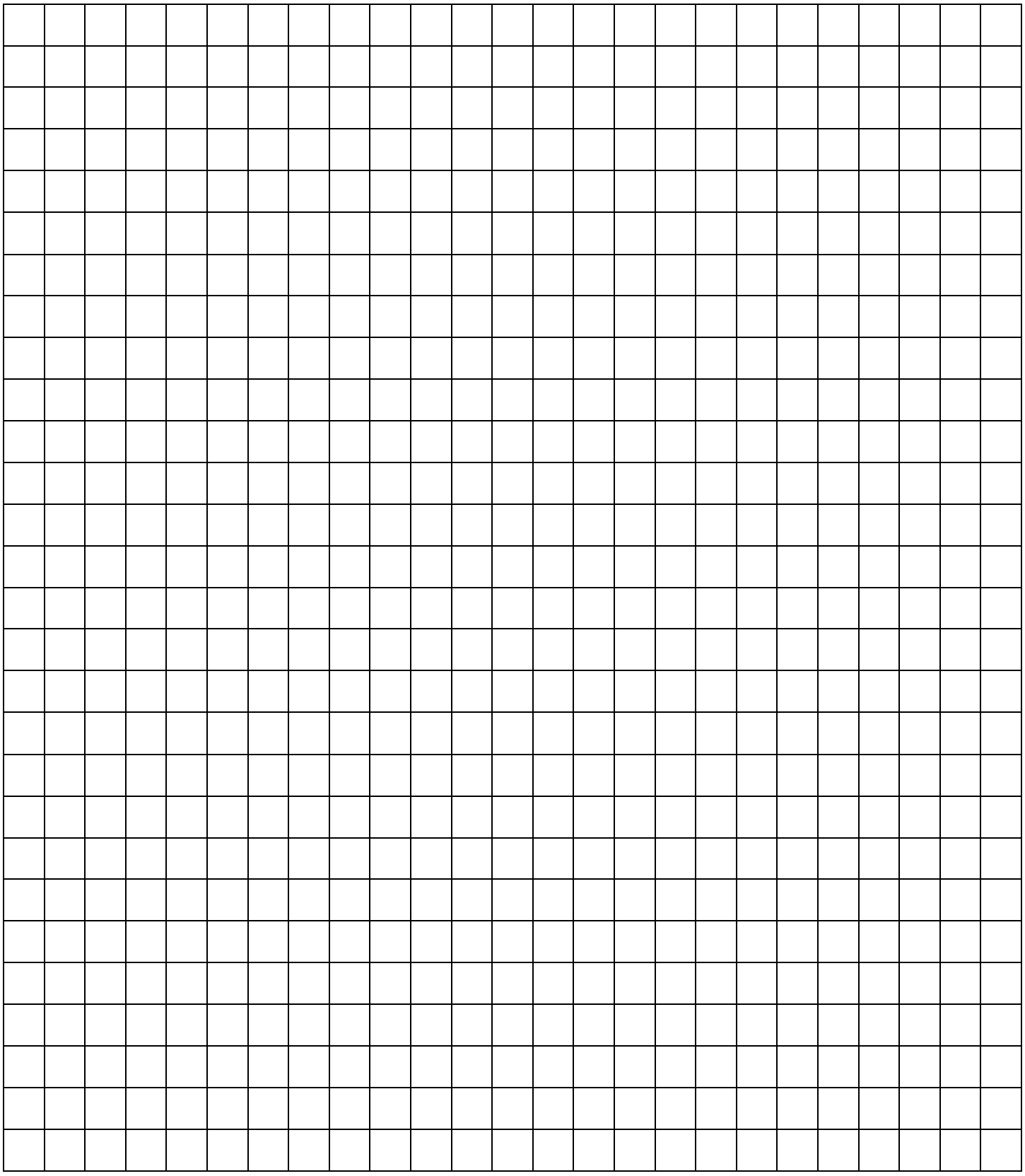
White = $^{1}/_{5}$, pink = ½, hybrid = $^{3}/_{10}$

2) Use the following diagram to write a situation that can be represented by this diagram. Write the fractional part represented with each type of flower. The picture is drawn to scale.

.



Marigolds 1/4, Roses 1/4, Petunias 1/8, Daisies 3/8



Unit 4, Activity 2, Fraction Table

1 whole											
½						½					
⅓				⅓				⅓			
¼				¼				¼			
$^1/_5$				$^1/_5$				$^1/_5$			
$^1/_6$				$^1/_6$				$^1/_6$			
⅛				⅛				⅛			
$^1/_{10}$				$^1/_{10}$				$^1/_{10}$			
$^1/_{12}$				$^1/_{12}$				$^1/_{12}$			

Name _____ Date _____

Using your fraction table, model each situation and sketch a diagram that represents the situation. Write your answers in complete sentences and include a unit when necessary.

1. Suppose you are building a tree house. A board is $^{11}/_{12}$ yard long. You need $^{7}/_{12}$ yard of the board for a brace. How much is left over after you cut off the piece you need for the brace?

2. In an experiment, a kudzu plant is $1\ ^{1}/_{6}$ feet tall. Over time, the plant grows to $4\ ^{5}/_{6}$ feet. How much did the plant grow?

3. For school ribbons, $^{1}/_{5}$ of the students chose to have a red background, $^{2}/_{5}$ of the students chose to have a white background, and the rest of the students chose a blue background. What fraction of the students chose the blue background?

4. Suppose it rains $^{3}/_{12}$ inch on Friday and $^{4}/_{6}$ inch on Saturday.

   A) What was the total rainfall for the two days?

   B) What was the difference in rainfall for the two days?

5. A typical garden spider is approximately $^{3}/_{4}$ inch long. A typical black widow spider is approximately $^{1}/_{2}$ inch long.

   A) How much longer is the garden spider?

   B) Would the total length of both spiders be greater or less than one inch? Justify your answer with a diagram.

Unit 4, Activity 2, Fraction Operations with Answers

Name _____ Date _____

Using your fraction table, model each situation and sketch a diagram that represents the situation. Write your answers in complete sentences and include a unit when necessary.

1. Suppose you are building a tree house. A board is $^{11}/_{12}$ yard long. You need $^{7}/_{12}$ yard of the board for a brace. How much is left over after you cut off the piece you need for the brace?

   $^{11}/_{12} - {}^{7}/_{12} = {}^{4}/_{12}$ or $^{1}/_{3}$ inch *There is 1/3 in of board left over.*

2. In an experiment, a kudzu plant is $1\ ^{1}/_{6}$ feet tall. Over time, the plant grows to $4\ ^{5}/_{6}$ feet. How much did the plant grow?

   $4\ ^{5}/_{6} - 1\ ^{1}/_{6} = 3\ ^{4}/_{6}$ or $3\ ^{2}/_{3}$ feet *The plant grew 3 ½ feet.*

3. For school ribbons, $^{1}/_{5}$ of the students chose to have a red background, $^{2}/_{5}$ of the students chose to have a white background, and the rest of the students chose a blue background. What fraction of the students chose the blue background?

   $^{1}/_{5} + {}^{2}/_{5} = {}^{3}/_{5}$
   $1 - {}^{3}/_{5} = {}^{2}/_{5}$ *2/5 of the ribbons will have a blue background.*

4. Suppose it rains $^{3}/_{12}$ inch on Friday and $^{4}/_{6}$ inch on Saturday.

   a. What was the total rainfall for the two days?

      $^{3}/_{12} + {}^{4}/_{6} = {}^{3}/_{12} + {}^{8}/_{12} = {}^{11/}{}_{12}$ *The total rainfall for the two days was 11/12 inches.*

   b. What was the difference in rainfall for the two days?

      $^{4}/_{6} - {}^{3}/_{12} = {}^{8}/_{12} - {}^{3}/_{12} = {}^{5/}{}_{12}$ *The difference in rainfall for the two days was 5/12 inches.*

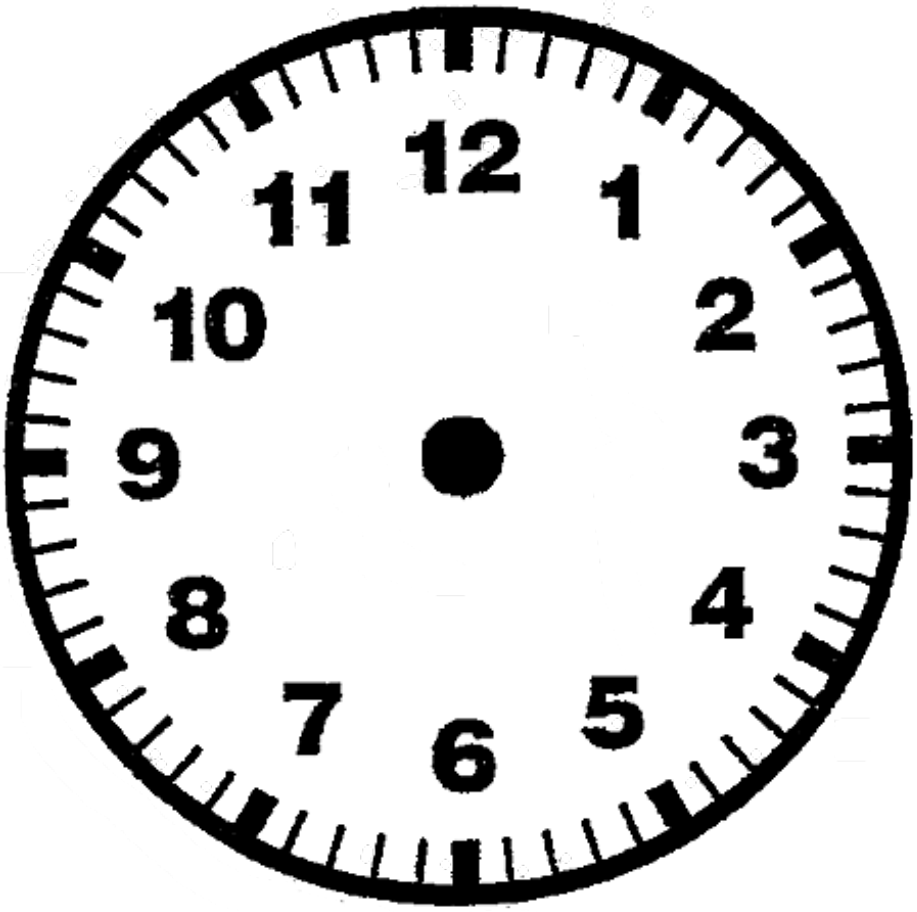
5. A typical garden spider is $^{3}/_{4}$ inch long. A typical black widow spider is $^{1}/_{2}$ inch long.

   a. How much longer is the garden spider?

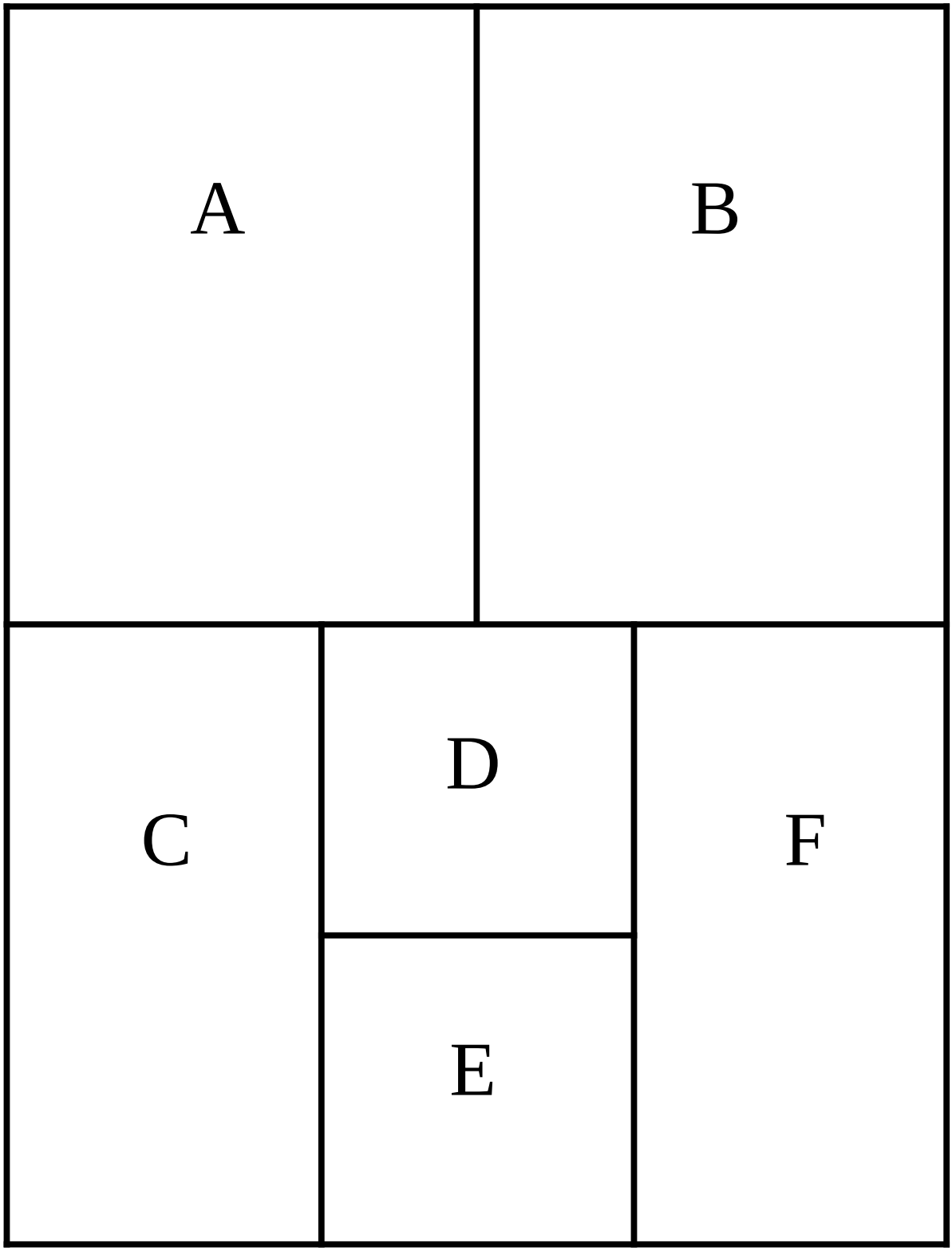
      $^{3}/_{4} - ½ = {}^{3}/_{4} - {}^{2}/_{4} = ¼$ *The garden spider is ¼ inch longer.*

   b. Would the total length of both spiders be greater or less than one inch? Justify your answer with a diagram.

      Yes, diagrams will vary.


12
1
2
3
4
5
6
7
8
9
10
11

A & B are equal in size; C & F are equal in size; D & E together are the same size as C and F; and the height of A and C are equal



Unit 4, Activity 6, Multiplying Fractions

Name _____ Date _____

Draw a model to solve the following problems. Write your answers in complete sentences and include a unit when necessary.

1. Cindy has a lemonade stand. On Saturday she used 1/3 of a bag of sugar. On Sunday she used 1/2 the amount of sugar she used on Saturday. How much of a bag of sugar did she use on Sunday?

2. The adult dogs at the pet store are fed 5/6 of a bag of dog food each day. The puppies are fed 1/2 as much dog food as the adult dogs. What fraction of the bag of dog food are the puppies fed each day?

3. Ms. Jones polled the students in her class and found that $\frac{1}{3}$ of them have a cat. Of the students who have a cat, $\frac{2}{3}$ also have a dog. What fraction of the students in Ms. Jones' class have a cat and a dog?

Write a problem and draw a model to represent the following problems.

4. $\frac{2}{3} \times \frac{1}{4}$

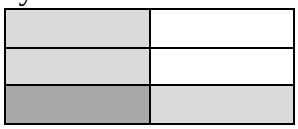
5. $\frac{3}{4} \times \frac{1}{5}$

Unit 4, Activity 6, Multiplying Fractions with Answers

Name _____ Date _____

Draw a model to solve the following problems. Write your answers in complete sentences and include a unit when necessary.

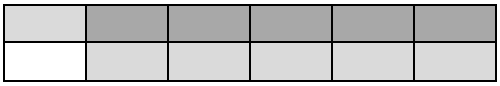
1. Cindy has a lemonade stand. On Saturday she used 1/3 of a bag of sugar. On Sunday she used 1/2 the amount of sugar she used on Saturday. How much of a bag of sugar did she use on Sunday?



$$\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$$

Cindy used 1/6 bag of sugar on Sunday.

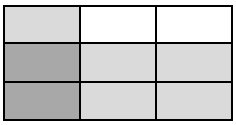
2. The adult dogs at the pet store are fed 5/6 of a bag of dog food each day. The puppies are fed 1/2 as much dog food as the adult dogs. What fraction of the bag of dog food are the puppies fed each day?



$$\frac{1}{2} \times \frac{5}{6} = \frac{5}{12}$$

The puppies are fed 5/12 of the bag.

3. Ms. Jones polled the students in her class, $\frac{1}{3}$ have a cat. Of the students who have a cat, $\frac{2}{3}$ also have a dog. What fraction of the students in Ms. Jones' class have a cat and a dog?



$$\frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$$

2/9 of the students have a dog and a cat.

Write a problem and draw a model to represent the following problems.

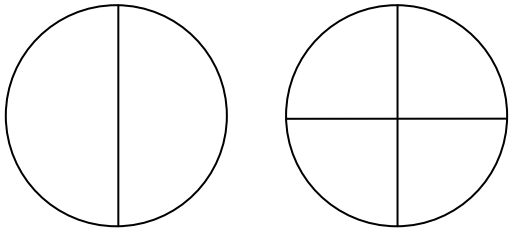
4. $\frac{2}{3} \times \frac{1}{4}$ *Answer:* $\frac{1}{6}$ *Problems and models will vary.*

5. $\frac{3}{4} \times \frac{1}{5}$ *Answer:* $\frac{3}{20}$ *Problems and models will vary.*

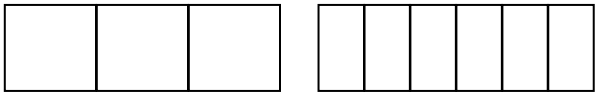
Name _____ Date _____

Solve.

1. How many $\frac{1}{4}$ of a pizza slices are in $\frac{1}{2}$ a pizza?



2. Sam has $\frac{1}{3}$ foot of yarn. How many $\frac{1}{6}$ foot pieces can she cut?



3. John mowed all but $\frac{1}{4}$ of the yard. If he divides the yard into $\frac{1}{12}$ sections, how many sections does he have left to mow?

Write a problem and draw a model to represent the following problems.

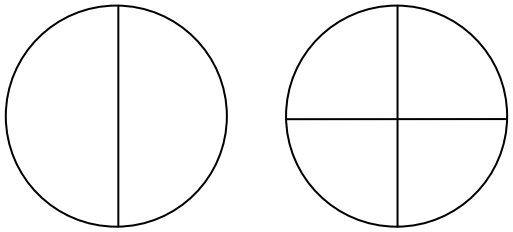
4. $\frac{2}{5} \div \frac{1}{10}$

5. $\frac{3}{4} \div \frac{1}{12}$

Unit 4, Activity 7, Dividing Fractions with Answers

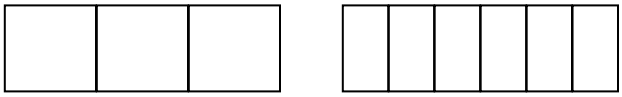
Solve.

1. How many $\frac{1}{4}$ of a pizza slices are in $\frac{1}{2}$ a pizza?



Two $\frac{1}{4}$ piece slices are in $\frac{1}{2}$ a pizza.

2. Sam has $\frac{1}{3}$ foot of yarn. How many $\frac{1}{6}$ foot pieces can she cut?



She can cut 2 pieces of yarn.

3. John mowed all but $\frac{1}{4}$ of the yard. If he divides the yard into $\frac{1}{12}$ sections, how many sections does he have left to mow?

John has 3 sections left to mow.

Write a problem and draw a model to represent the following problems.

4. $\frac{2}{5} \div \frac{1}{10}$ *Answer: 4* *Problems and models will vary.*

5. $\frac{3}{4} \div \frac{1}{12}$ *Answer: 9* *Problems and models will vary.*

Name _____ Date _____

You are having a party and would like to make brownies for dessert. There will be 30 guests coming to your party. You want to make 3 brownies for each person. How much of each ingredient will you need?

Brownie Recipe
Yields 1½ dozen brownies

- ⅔ cup bittersweet chocolate
- 8 tablespoons butter
- 4 large eggs
- ¼ teaspoon salt
- ½ cup granulated sugar
- ½ teaspoons vanilla extract
- ¾ cup all-purpose flour
- 1 cup chopped walnuts

1. How many brownies does one recipe make?

2. How many brownies do you need for the party?

3. How will you adjust the recipe to make enough brownies for all of your guests to have 3 brownies?

4. Complete the table.

Ingredient	Original Amount	For the Party

Unit 4, Activity 8, Recipe with Answers

Name _____ Date _____

You are having a party and would like to make brownies for dessert. There will be 30 guests coming to your party. You want to make 3 brownies for each person. How much of each ingredient will you need?

Brownie Recipe
Yields 1½ dozen brownies

- ⅔ cup bittersweet chocolate
- 8 tablespoons butter
- 4 large eggs
- ¼ teaspoon salt
- ½ cup granulated sugar
- ½ teaspoons vanilla extract
- ¾ cup all-purpose flour
- 1 cup chopped walnuts

1. How many brownies does one recipe make?

   18 brownies

2. How many brownies do you need for the party?

   90 brownies

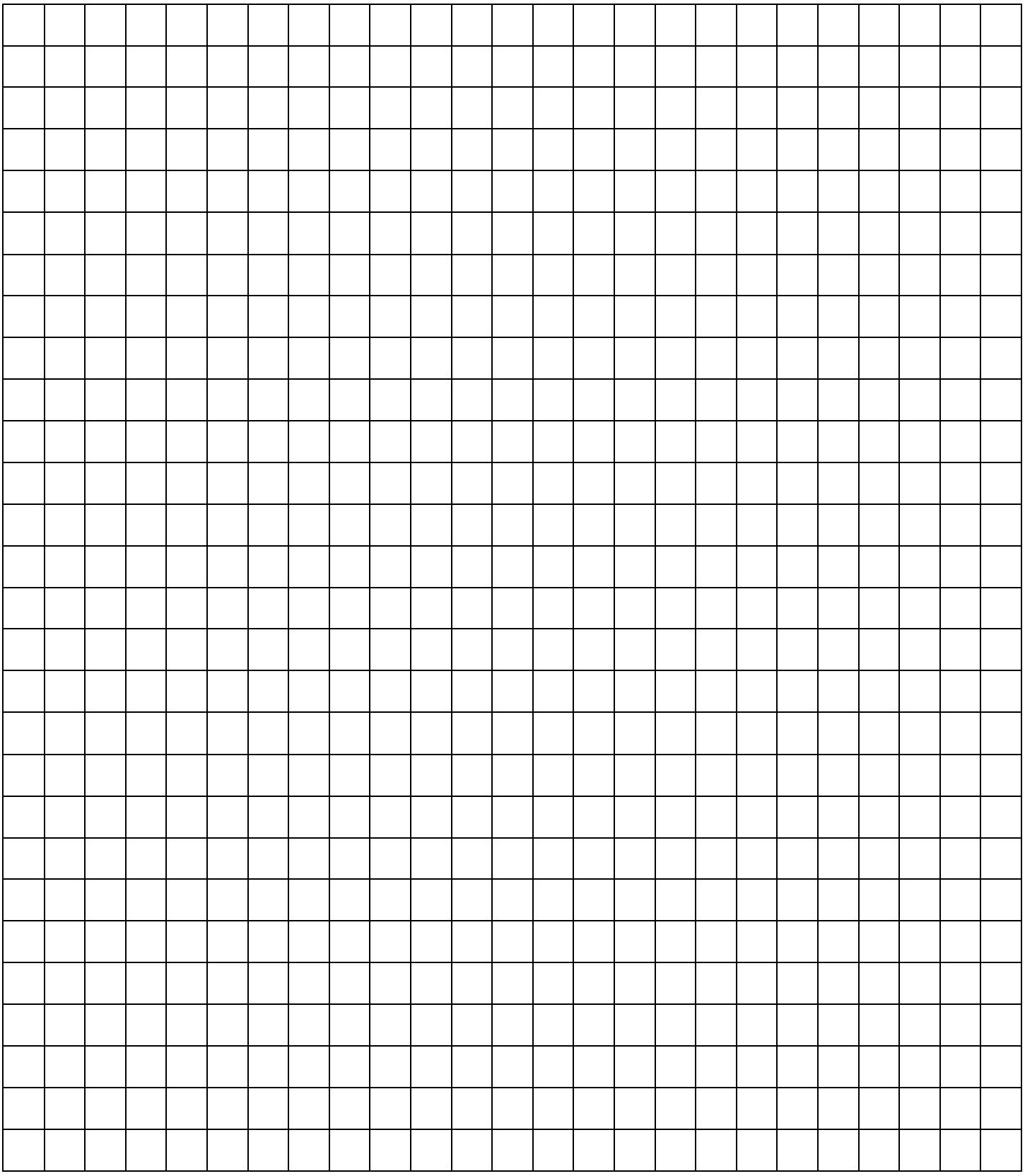
3. How will you adjust the recipe to make enough brownies for all of your guest to have 3 brownies?

   Multiply the ingredients by 5

4. Complete the table.

Ingredient	Original Amount	For the Party
Chocolate	*⅔ cup*	*3 ⅓ cups*
Butter	*8 tbsp*	*40 tbsp*
Eggs	*4*	*20*
Salt	*¼ tsp*	*1 ¼ tsp*
Sugar	*½ cup*	*2 ½ cups*
Vanilla extract	*½ tsp*	*2 ½ tsp*
Flour	*¾ cup*	*3 ¾ cups*
Walnuts	*1 cup*	*5 cups*

Unit 5, Activity 1, Graph Paper



Unit 5, Activity 1, Decimal Operations

Name _____ Date _____

Solve.

1. 48.533 + 4.11
2. 3.7 + 28.715
3. 14.01 + 5.25
4. 77.743 + 98.6
5. 8.07 + 1.063
6. 78.024 + 5.8
7. 6.68 + 91.085
8. 34.9 + 83.25
9. 6.7 – 1.3
10. 8.4 – 2.093
11. 29.63 – 8.4
12. 4.9 – 4.05
13. 61.004 – 60.485
14. 82.95 – 42.027
15. 7.05 – 5.5
16. 6.8 – 5.034
17. Suzie wanted to buy new jeans and a new shirt for the school dance. Her mother took her shopping in a big store downtown, and they looked for just the right shirt for almost two hours! Finally, Suzie found the one she wanted. The price of the jeans was $20.48 and the shirt's price was $21.23. How much did Suzie's new outfit cost in all?
18. Scott has $9.57 to spend on a new shirt at a store in Sydney. He likes a shirt that costs $13.99. How much money does he need to borrow to buy the shirt that he likes?
19. Long-haired Lucy decided it was time for a new haircut. She went to the hairdressers with hair 74.2 cm long. When she left, it was 21.6 cm long. How much hair had the hairdressers taken off?
20. Katie is making a gift for her mom for Mother's Day. She will buy 0.5 m of pink ribbon, 1.25 m of white ribbon, and 0.75m of green ribbon. How many meters of ribbon will she buy in all?

Unit 5, Activity 1, Decimal Operations with Answers

Name _____ Date _____

Solve.

1. 48.533 + 4.11 = *52.643*
2. 3.7 + 28.715 = *32.415*
3. 14.01 + 5.25 = *19.26*
4. 77.743 + 98.6 = *176.343*
5. 8.07 + 1.063 = *9.133*
6. 78.024 + 5.8 = *83.824*
7. 6.68 + 91.085 = *97.765*
8. 34.9 + 83.25 = *118.15*
9. 6.7 – 1.3 = *5.4*
10. 8.4 – 2.093 = *6.307*
11. 29.63 – 8.4 = *21.23*
12. 4.9 – 4.05 = *0.85*
13. 61.004 – 60.485 = *0.519*
14. 82.95 – 42.027 = *40.923*
15. 7.05 – 5.5 = *1.55*
16. 6.8 – 5.034 = *1.766*

17. Suzie wanted to buy new jeans and a new shirt for the school dance. Her mother took her shopping in a big store downtown, and they looked for just the right shirt for almost two hours! Finally, Suzie found the one she wanted. The price of the jeans was $20.48 and the shirt's price was $21.23. How much did Suzie's new outfit cost in all?

$41.71

18. Scott has $9.57 to spend on a new shirt at a store in Sydney. He likes a shirt that costs $13.99. How much money does he need to borrow to buy the shirt that he likes?

$4.42

19. Long-haired Lucy decided it was time for a new haircut. She went to the hairdressers with hair 74.2 cm long. When she left, it was 21.6 cm long. How much hair had the hairdressers taken off?

52.6 cm

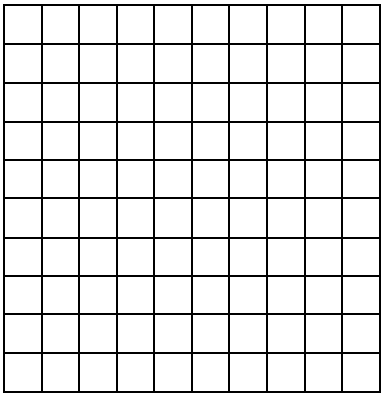
20. Katie is making a gift for her mom for Mother's Day. She will buy 0.5 m of pink ribbon, 1.25 m of white ribbon, and 0.75m of green ribbon. How many meters of ribbon will she buy in a all?

She will need to buy 2.5 m of ribbon

Unit 5, Activity 4, Hundredths Square

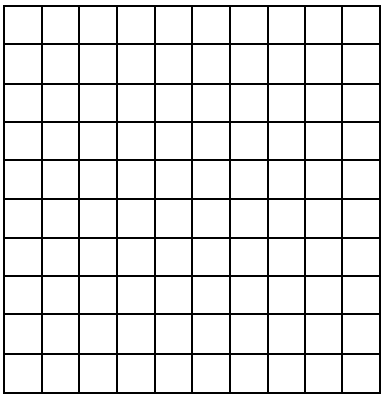
Name _____ Date _____

1.



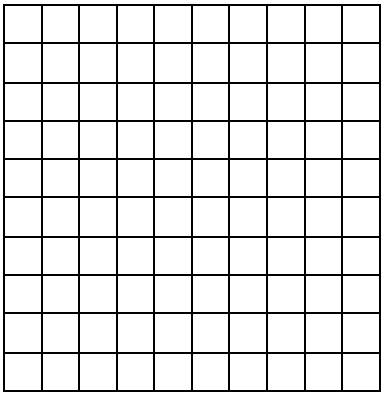
Problem Modeled _____

2.



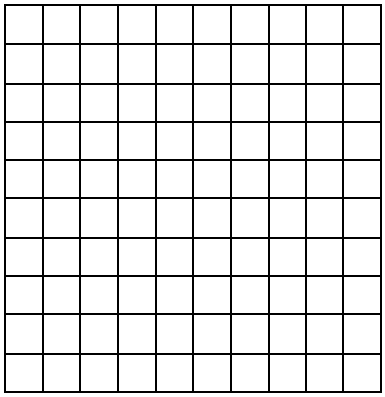
Problem Modeled _____

3.



Problem Modeled _____

4.

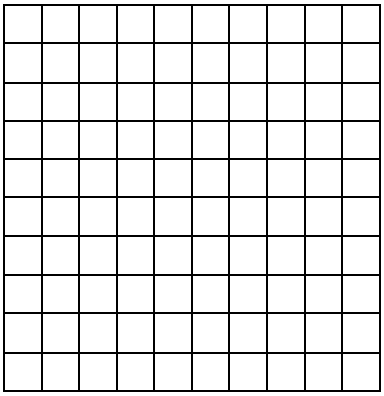


Problem Modeled _____

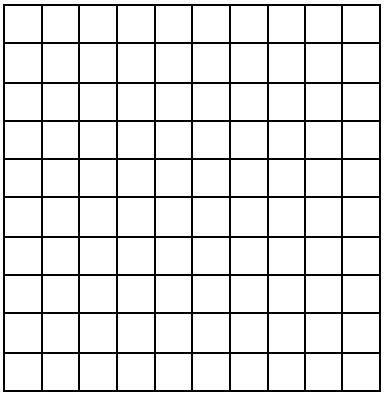
Name _____ Date _____

Model and solve the following problems.

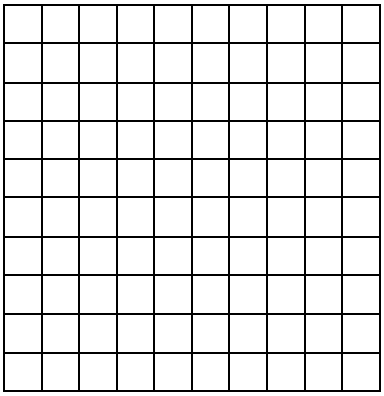
1. 0.4×0.9



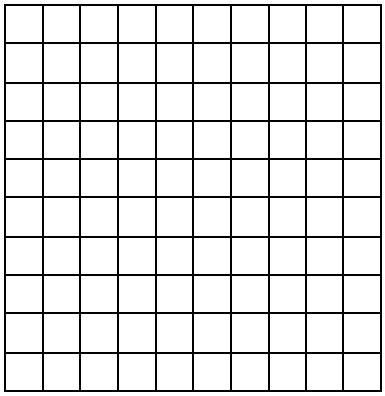
2. 0.5×0.8



3. 0.6×0.6



4. 0.2×0.7

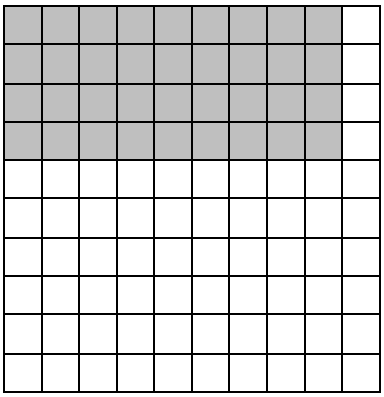


Unit 5, Activity 4, Modeling Multiplying Decimals with Answers

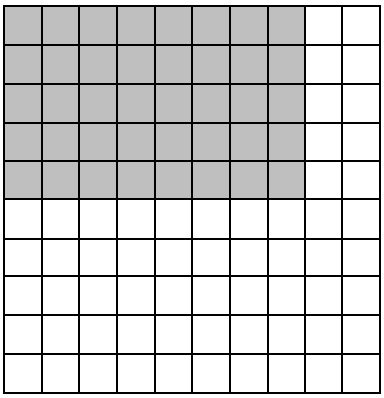
Name _____ Date _____

Model and solve the following problems.

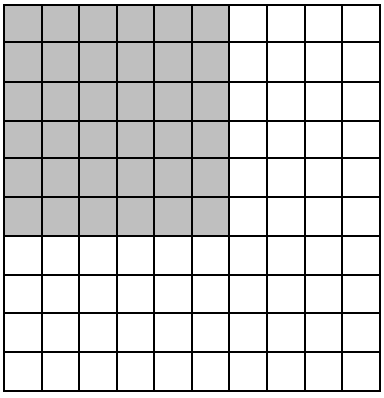
1. $0.4 \times 0.9 = \textit{0.36}$



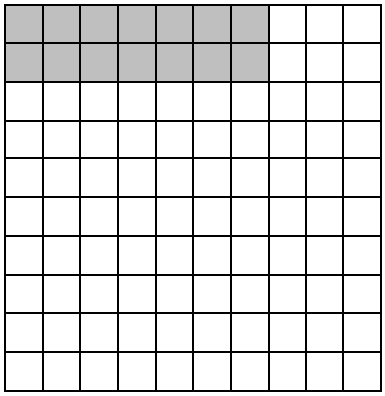
2. $0.5 \times 0.8 = \textit{0.4}$



3. $0.6 \times 0.6 = \textit{0.36}$



4. $0.2 \times 0.7 = \textit{0.14}$



Name _____ Date _____

Predict the number of decimal places in the product.

1. 0.101×1.12

2. 8.21×2.3

3. 5×1.234

4. 0.14×4.31

Solve.

5. 1.02×4.046

6. 3.765×1.1

7. 2.24×0.35

8. 6.001×12.2

9. 15×2.11

10. 8.1×4.5

11. 2.353×4.5

12. 11.5×3.221

13. 8.27×6.52

14. 5.41×1.02

Unit 5, Activity 4, Multiplying Decimals with Answers

Name _____ Date _____

Predict the number of decimal places in the product.

1. 0.101 × 1.12

   5 places

2. 8.21 × 2.3

   3 places

3. 5 × 1.234

   3 places

4. 0.14 × 4.31

   4 places

Solve.

5. 1.02 × 4.046

   4.12692

6. 3.765 × 1.1

   4.1415

7. 2.24 × 0.35

   0.784 or 0.7840

8. 6.001 × 12.2

   73.2122

9. 15 × 2.11

   31.65

10. 8.1 × 4.5

    36.45

11. 2.353 × 4.5

    10.5885

12. 11.5 × 3.221

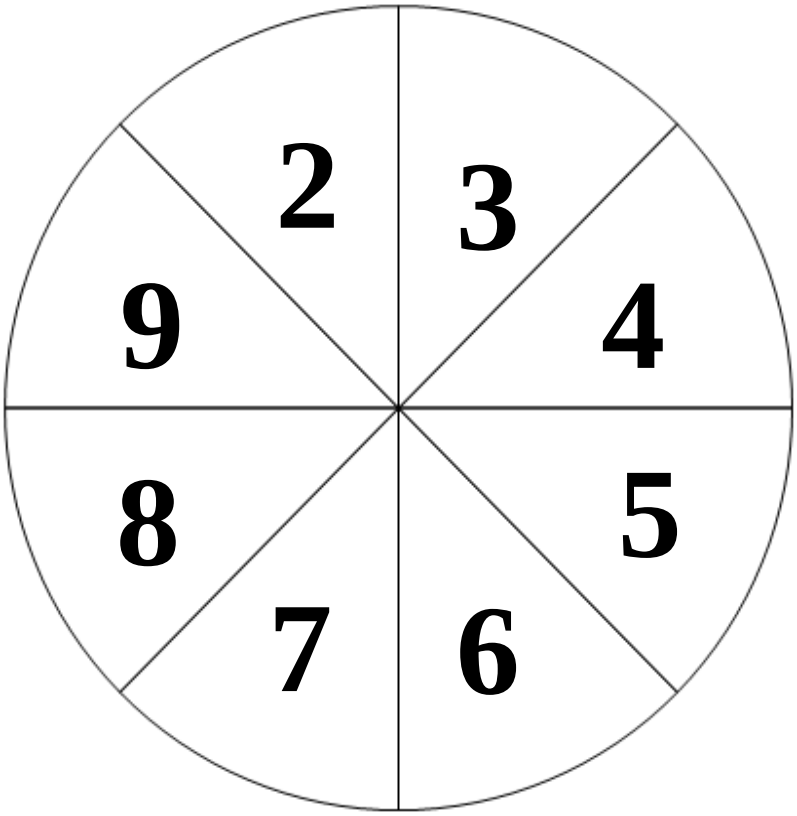
    37.0415

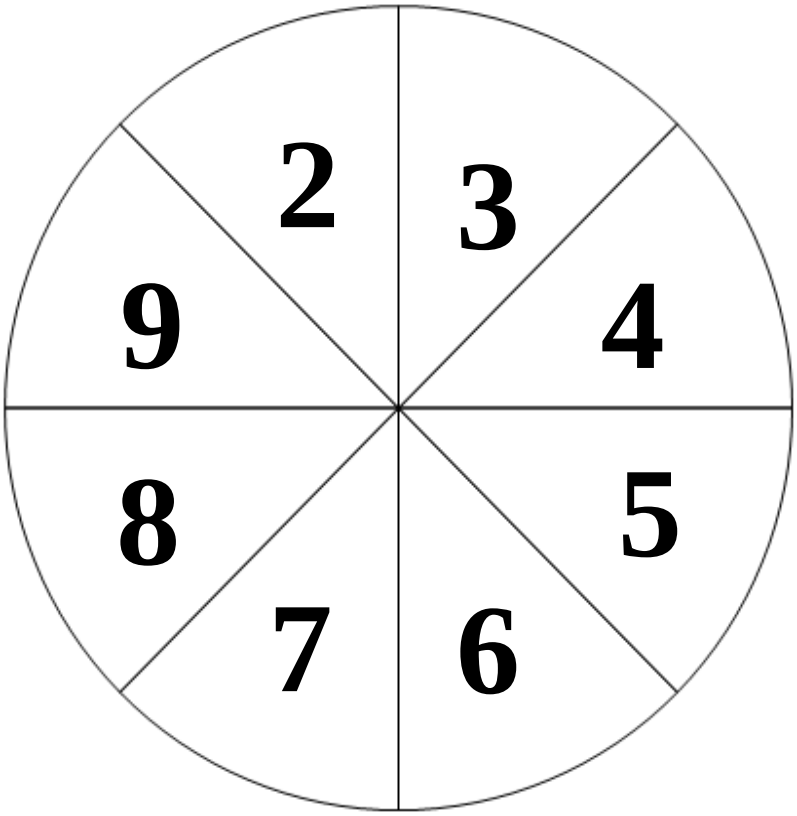
13. 8.27 × 6.52

    53.9204

14. 5.41 × 1.02

    5.5182


2
3
9
4
8
5
7
6


2
3
9
4
8
5
7
6

$1.15	$1.26	$1.95
$2.46	$2.65	$1.77
$3.10	$8.12	$12.39
$15.99	$10.08	$12.90

Name _____ Date _____

Spinner Value	Card Amount	Product	Total Spent

Name _____ Date _____

Solve.

1. 87.4 ÷ 9.2

2. 14.03 ÷ 6.1

3. 4.55 ÷ 1.4

4. 0.322 ÷ 0.14

5. 7.15 ÷ 1.1

6. 12 ÷ 0.5

7. 2.5 ÷ 0.25

8. 6 ÷ 0.32

9. 0.26 ÷ 0.25

10. 3.72 ÷ 3.1

Name _____ Date _____

Solve.

1. 87.4 ÷ 9.2

   9.5

2. 14.03 ÷ 6.1

   2.3

3. 4.55 ÷ 1.4

   3.25

4. 0.322 ÷ 0.14

   2.3

5. 7.15 ÷ 1.1

   6.5

6. 12 ÷ 0.5

   24

7. 2.5 ÷ 0.25

   10

8. 6 ÷ 0.32

   18.75

9. 0.26 ÷ 0.25

   1.04

10. 3.72 ÷ 3.1

    1.2

Welcome to The Math Cafe

Menu

Appetizers:

Nachos	$6.65	Cheese Sticks	$4.49
Chips and Salsa	$2.99	Potato Skins	$7.29
Cheese Fries	$4.95	Onion Rings	$4.50

Entrees:

Hamburger	$6.99	Ribs	$10.45
Cheeseburger	$8.79	14 oz. Ribeye	$12.25
Chicken Sandwich	$8.95	Tacos	$8.49
Chicken Strips	$9.89	Burrito	$9.49
Loaded Pizza	$10.49	Fried Shrimp	$11.29

Drinks:

Flavored Tea	$2.29	Soft Drinks	$1.59
Unsweet Tea	$1.29	Lemonade	$2.59

Desserts:

Cheesecake	$5.35	Giant Cookie	$2.59
Chocolate Cake	$4.29	Sundae	$5.49

Name _____ Date _____

You and 3 of your friends are going out to eat. You have $75 to spend and you must order at least one appetizer and an entrée and drink for each person.

1. Record what you will order and calculate how much the bill is before tax and tip?

2. If tax is 8%, how much will the bill be including tax? (Hint: multiply the amount of the bill times 0.8 then add the amount to the total)

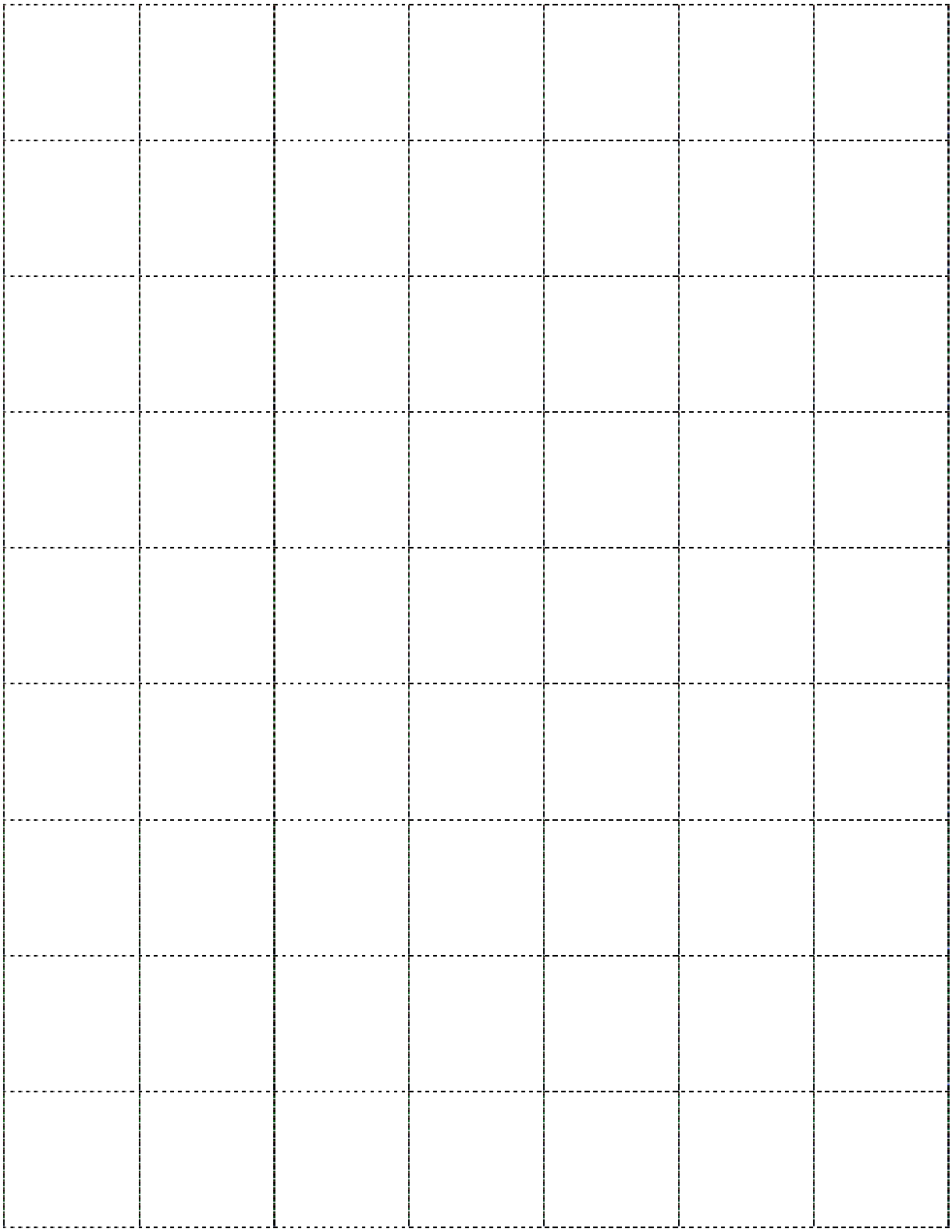
3. If you want to leave a 20% tip, how much extra should you pay? Do you still have enough money?(Hint: multiply the amount of the bill times 0.2, or multiply by 0.1 and then double that amount, then add the amount to the total)

4. If you and your friends decide to split the bill evenly, how much will each person pay?

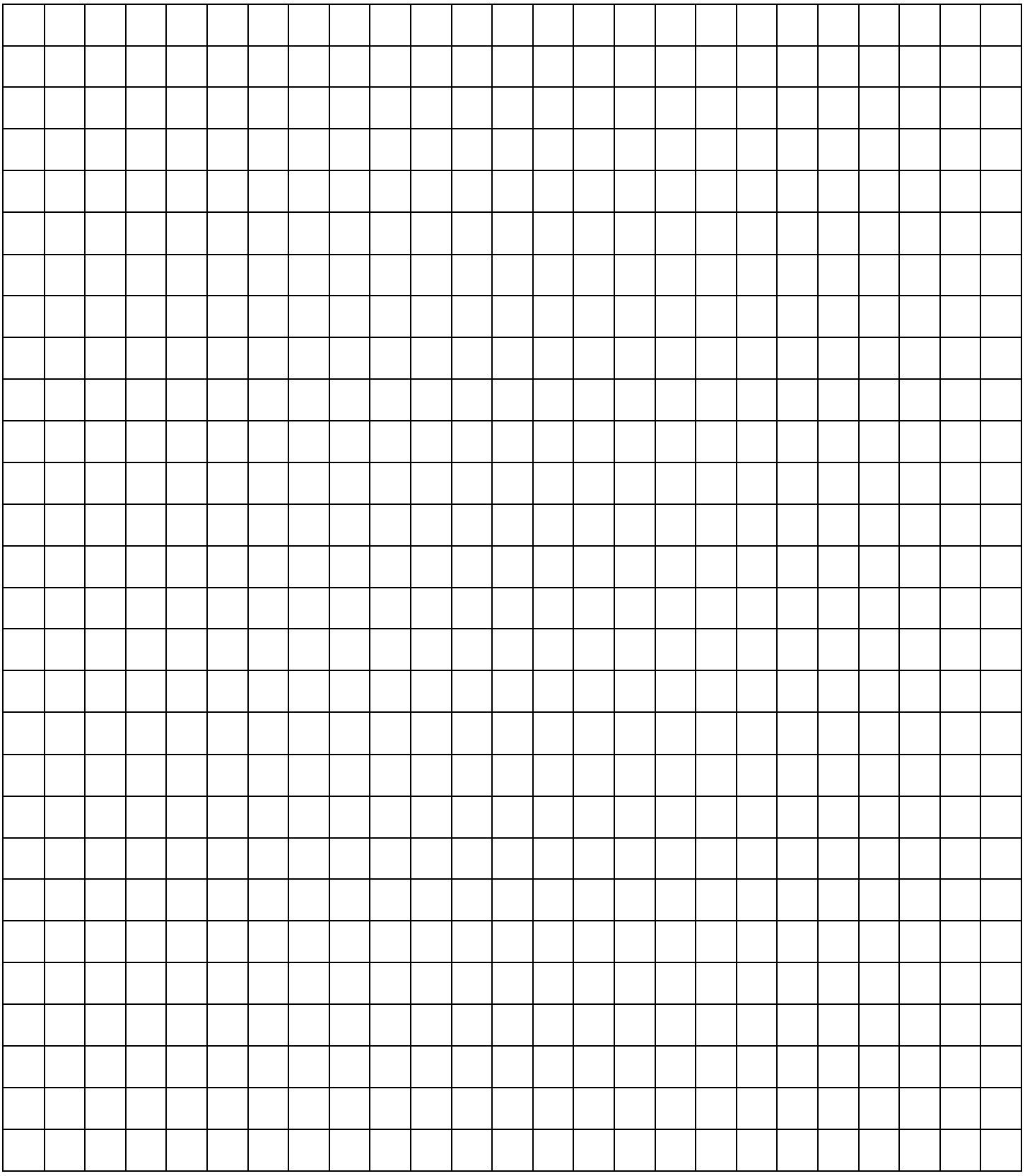
5. How much money will you have left?

Math Café Bill

Name of Food	***$***
Subtotal	
Tax	
Total of meal	
20% tip	



Unit 6, Activities 2, 3, 7, and 14, Grid Paper

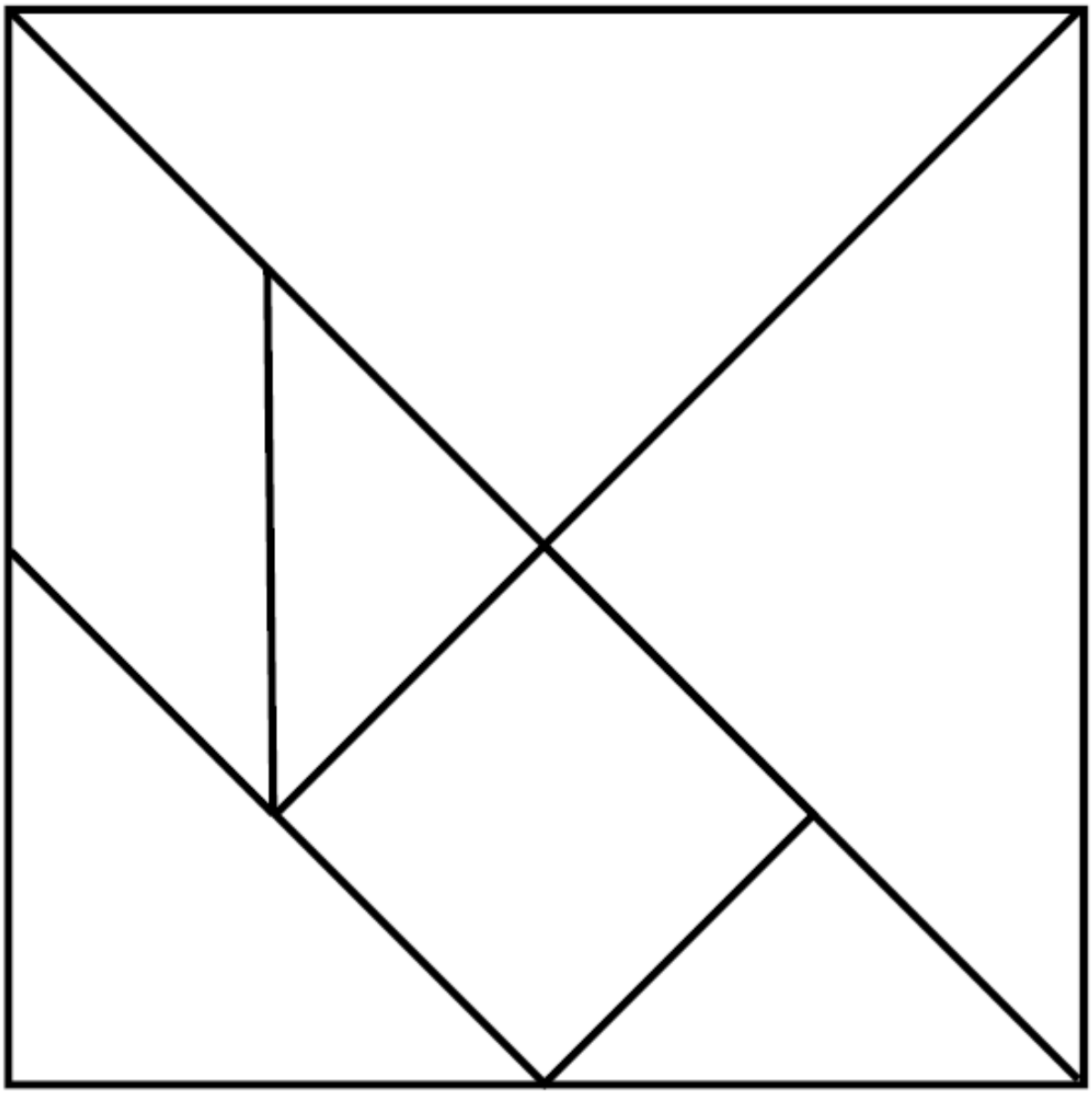


Name _____ Date _____

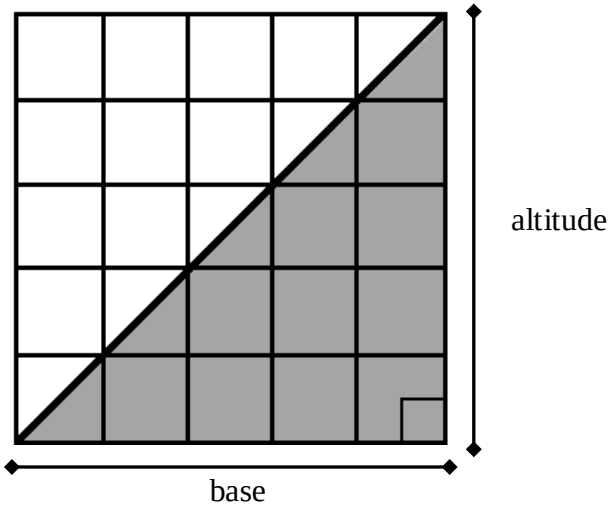
Dimensions of the Square (units)	**Number Squared**	**Area (square units)**

Name _____ Date _____

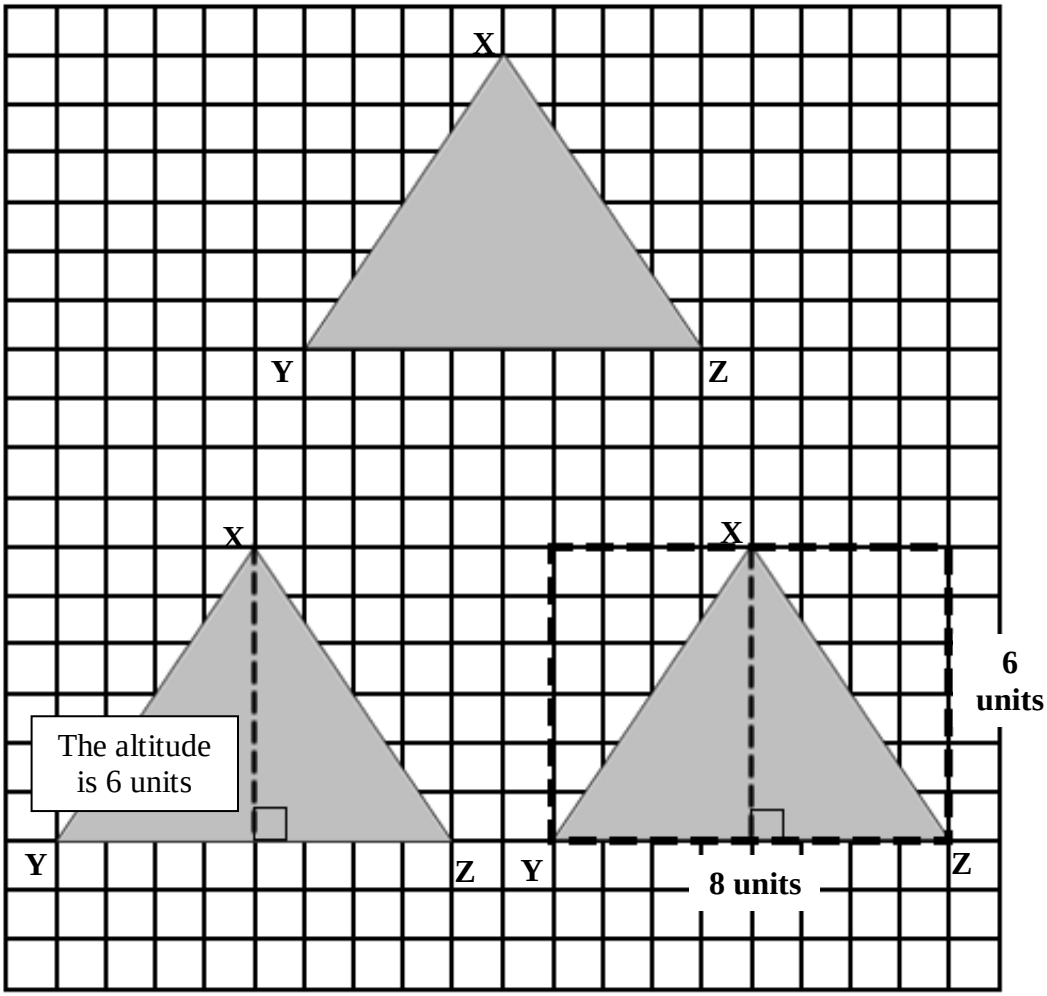
Dimensions of the Square (units)	**Number Squared**	**Area (square units)**
1×1	1^2	1
2×2	2^2	4
3×3	3^2	9
4×4	4^2	16
5×5	5^2	25
6×6	6^2	36
7×7	7^2	49
8×8	8^2	64
9×9	9^2	81
10×10	10^2	100
11×11	11^2	121
12×12	12^2	144



Part A


altitude
base

Part B

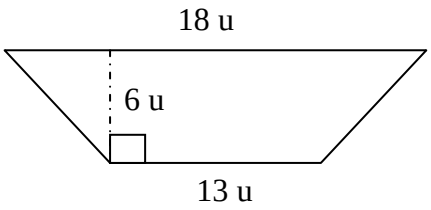

X
Y
Z
X
The altitude is 6 units
Y
Z
X
Y
Z
6 units
8 units

Name _____ Date _____

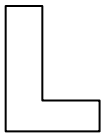
Solve the following problems.

1. Find the area of a triangle with a base length of five units and a height of six units.

2. Find the area of the trapezoid shown below by decomposing it into a rectangle and triangles.



3. The sixth grade class at Louisiana Middle School is building a giant wooden L for their school. The L will be 12 feet tall and 8 feet wide and the thickness of the block letter will be 2.5 feet. What is the area of the L?



Unit 6, Activity 5, Area with Answers

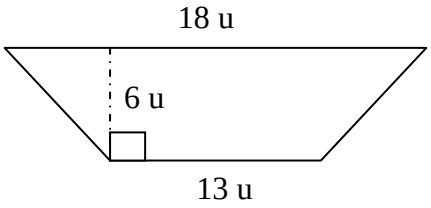
Name _____ Date _____

Solve the following problems.

1. Find the area of a triangle with a base length of five units and a height of six units.

A = ½ (b × h)
A = ½ (5 × 6)
A = 15 square units

2. Find the area of the trapezoid shown below by decomposing it into a rectangle and triangles.

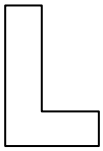


Area of 1 Triangle
Base = 2.5 u
Height = 6 u
½ (2.5 × 6)
7.5 sq. units

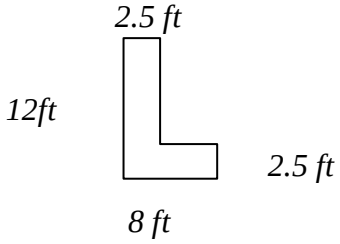
Rectangle
Length = 13 u
Width = 6 u
13 × 6
78 sq. units

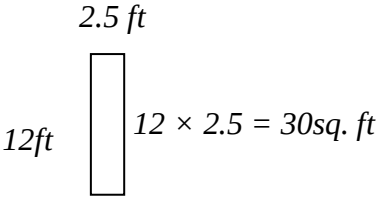
7. 5 + 7.5 + 78 = 93 sq. units

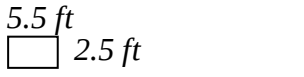
3. The sixth grade class at Louisiana Middle School is building a giant wooden L for their school. The L will be 12 feet tall and 8 feet wide and the thickness of the block letter will be 2.5 feet. What is the area of the L?



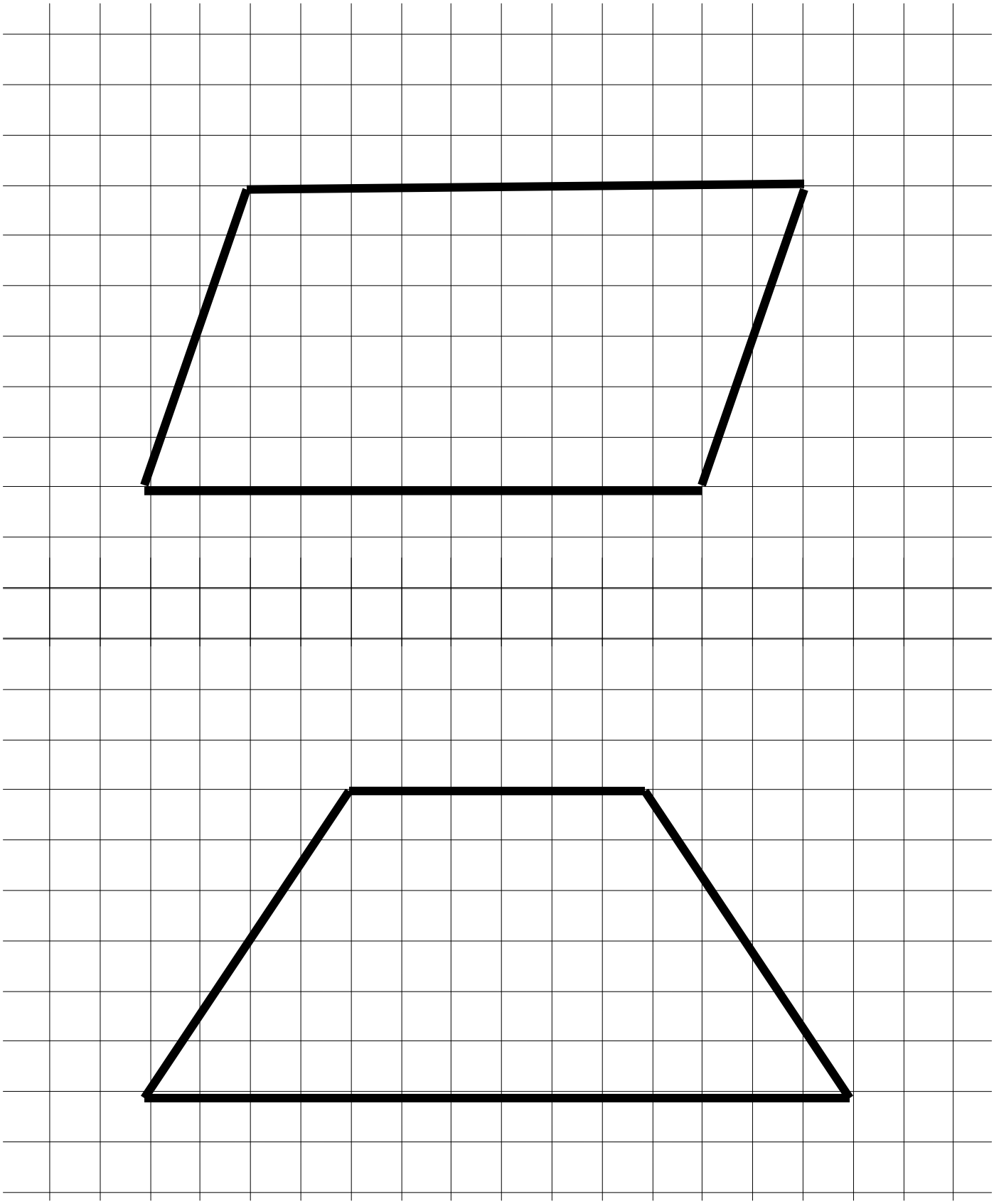
One possible way to find the area







30 + 13.75 = 43.75 sq. ft



integrated **iLEAP** **Mathematics Reference Sheet—Grade 6**

Use the information below to answer questions on the Math test.

U.S. Unit Conversions
1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet

Metric Unit Conversions
1 meter = 1,000 millimeters
1 meter = 100 centimeters
1 kilometer = 1,000 meters

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

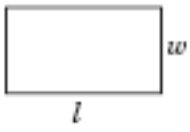
1 liter = 1,000 milliliters

1 kilogram = 1,000 grams

1 pound = 16 ounces
1 ton = 2,000 pounds

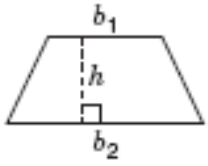
Distance Formula:
distance = rate • time

Rectangle



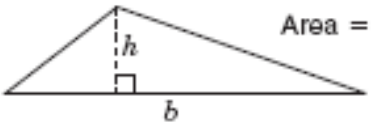
Area = $l \cdot w$
Perimeter = $2 \cdot (l + w)$

Trapezoid



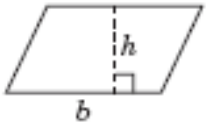
Area = $\frac{1}{2} \cdot h \cdot (b_1 + b_2)$

Triangle



Area = $\frac{1}{2} \cdot b \cdot h$

Parallelogram



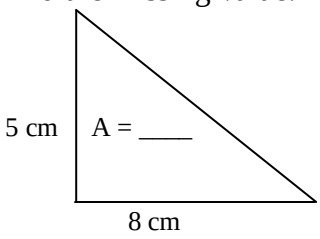
Area = $b \cdot h$

Mean:	In a collection of data, the sum of all the data divided by the number of data
Median:	The middle number or average of the two middle numbers in a collection of data when the data are arranged in order
Mode:	The number or numbers that occur most often in a collection of data
Range:	The difference between the greatest and the least numbers in a collection of data

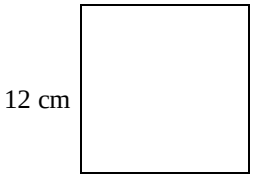
Name _____ Date _____

Use the formulas on the iLEAP Reference sheet to solve the following problems.

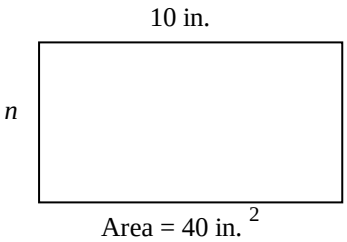
1. Find the missing value.



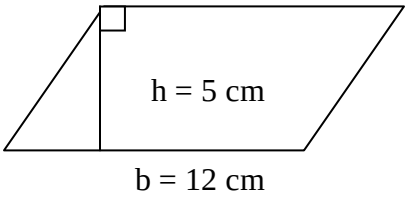
2. Find the perimeter and area of the following square.



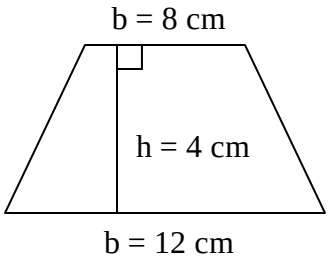
3. Find the value of *n* in the rectangle.



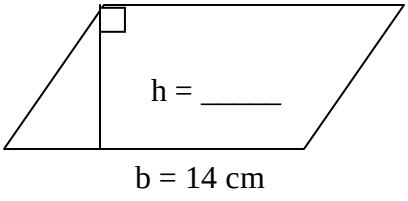
4. Find the area of the parallelogram.



5. Find the area of the trapezoid.



6. Find the height of the parallelogram.



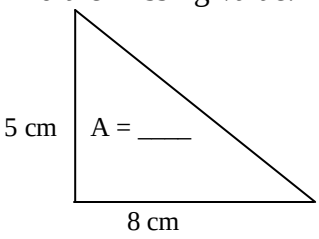
Area = 98 cm

Unit 6, Activity 6, Area and Perimeter with Answers

Name _____ Date _____

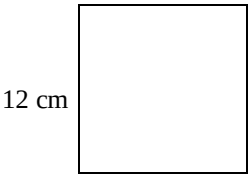
Use the formulas on the iLEAP Reference sheet to solve the following problems.

1. Find the missing value.



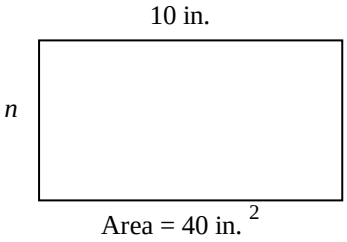
Area = 20 cm²

2. Find the perimeter and area of the following square.



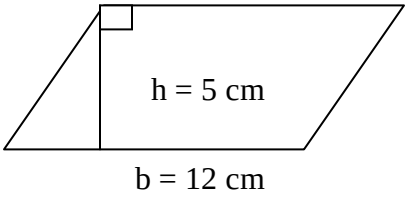
Area = 144 cm² *Perimeter = 48 cm*

3. Find the value of *n* in the rectangle.



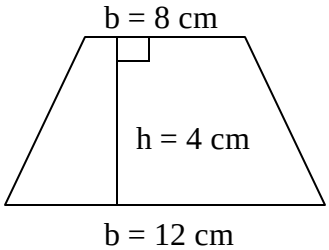
n = 4 in.

4. Find the area of the parallelogram.



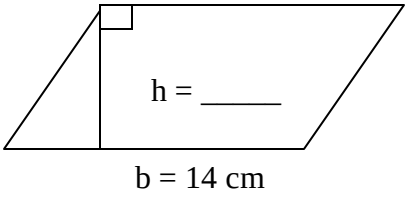
Area = 60 cm²

5. Find the area of the trapezoid.



Area = 40 cm²

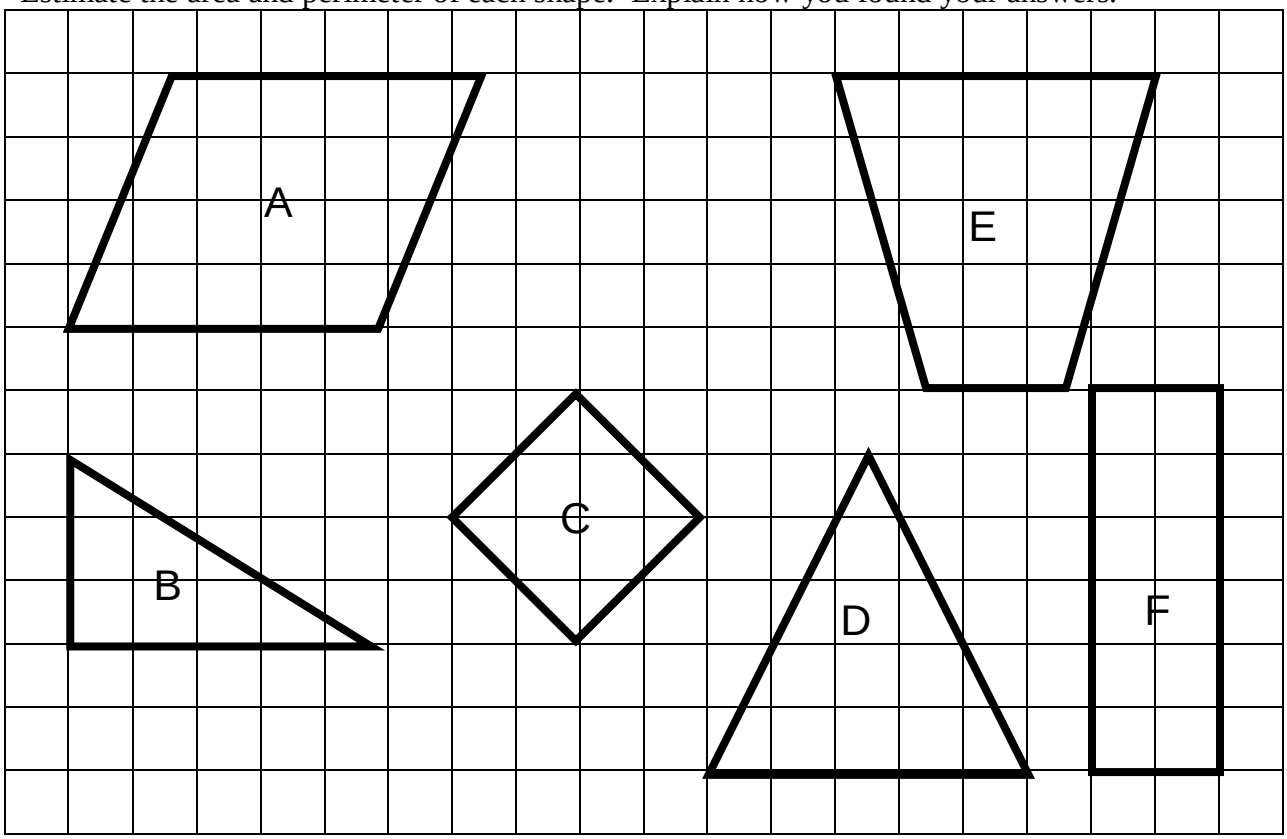
6. Find the height of the parallelogram.



Area = 98 cm

h = 7 cm

Estimate the area and perimeter of each shape. Explain how you found your answers.



A. area = _____ perimeter = _____

B. area = _____ perimeter = _____

C. area = _____ perimeter = _____

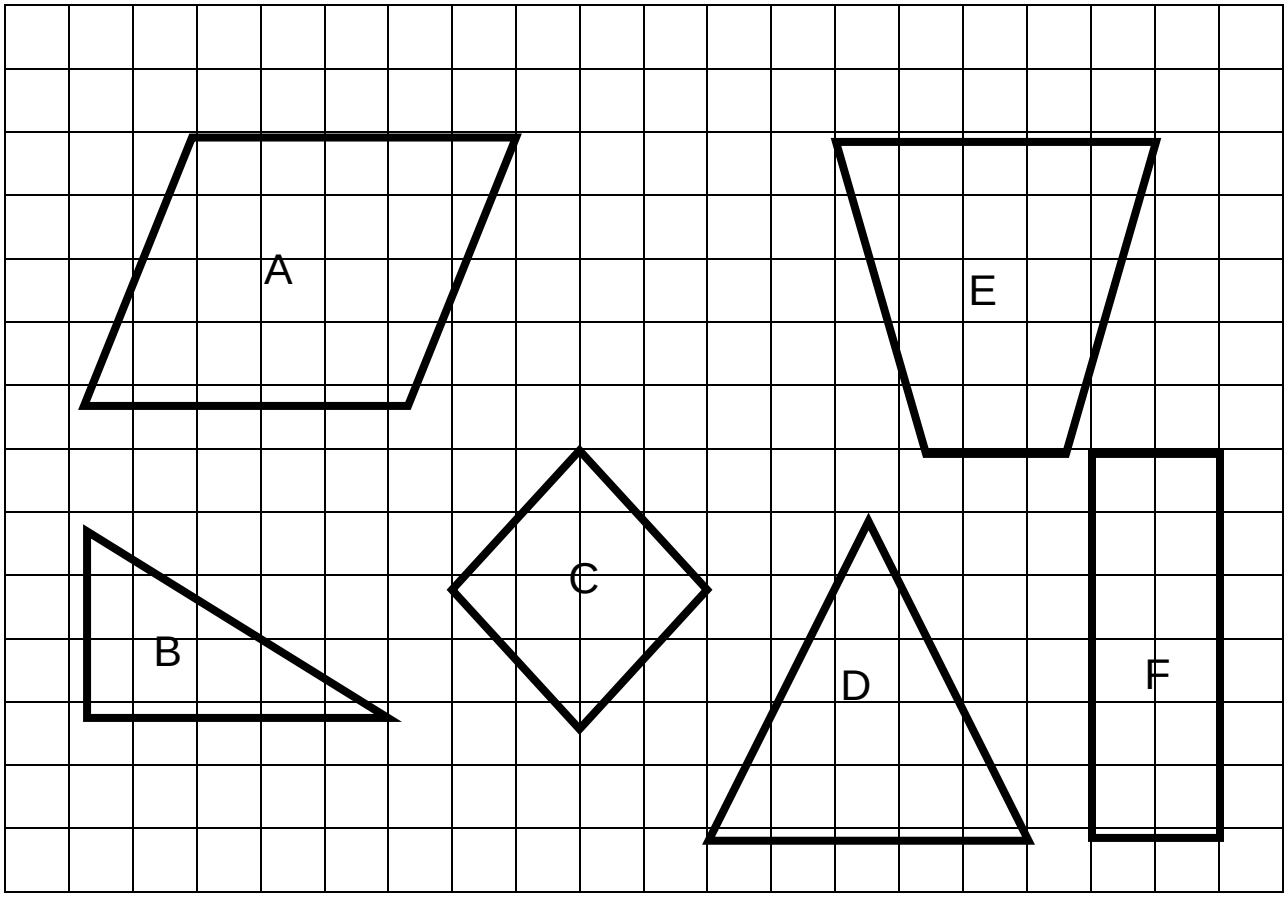
D. area = _____ perimeter = _____

E. area = _____ perimeter = _____

F. area = _____ perimeter = _____

Unit 6, Activity 7, 2-D Shapes with Answers

Estimate the area and perimeter of each shape. Explain how you found your answers.



A. area = *≈ 21 units²* perimeter = *≈ 20 units*

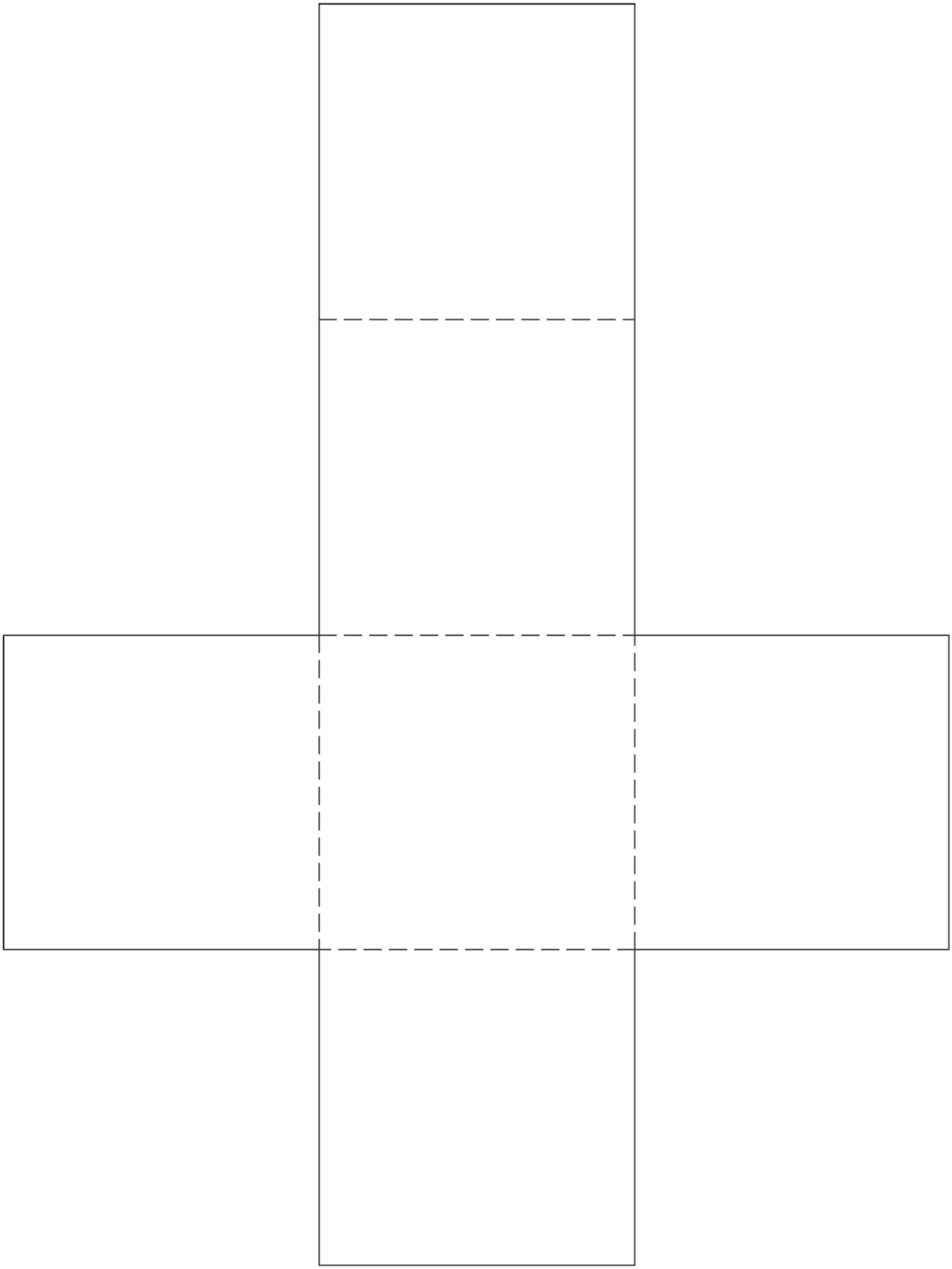
B. area = *≈ 7 units²* perimeter = *≈ 13 units*

C. area = *≈ 9 units²* perimeter = *≈ 12 units*

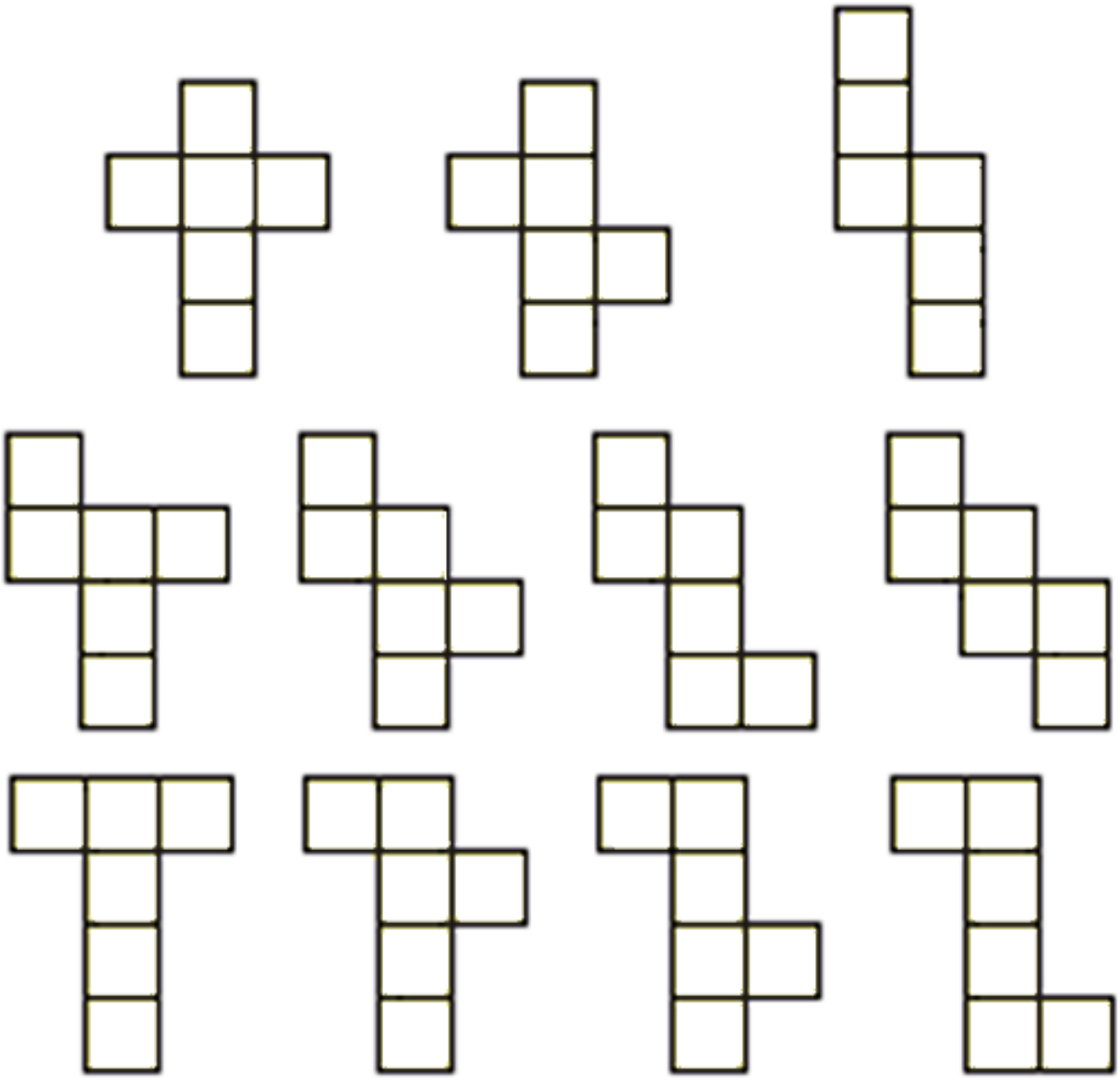
D. area = *≈ 13 units²* perimeter = *≈ 16 units*

E. area = *≈ 18 units²* perimeter = *≈ 17 units*

F. area = *≈ 12 units²* perimeter = *≈ 16 units*



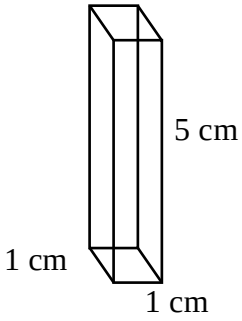
Unit 6, Activities 10 and 11, 1 Inch Grid Paper



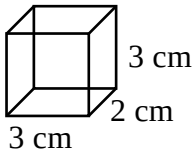
Name _____ Date _____

Draw the net and label the dimensions. Find the surface area.

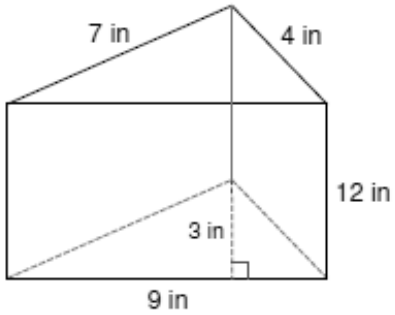
1.



2.



3.

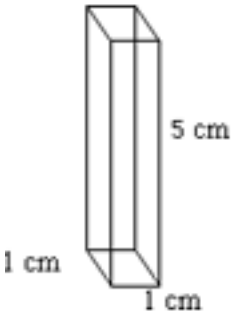


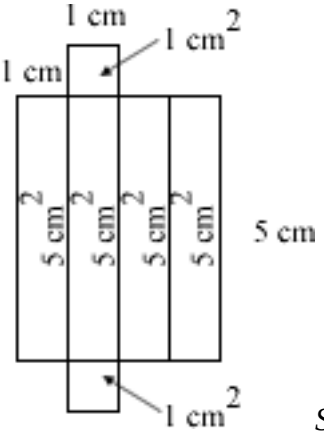
Unit 6, Activity 11, Surface Area with Answers

Name _____ Date _____

Draw the net and label the dimensions. Find the surface area.

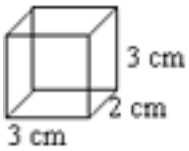
1.

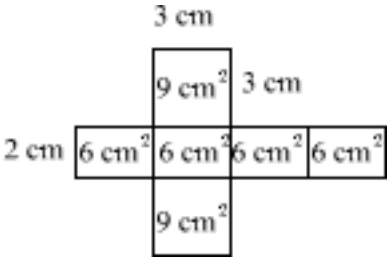




SA = 1 + 1 + 5 + 5 + 5 + 5 = 22 cm²

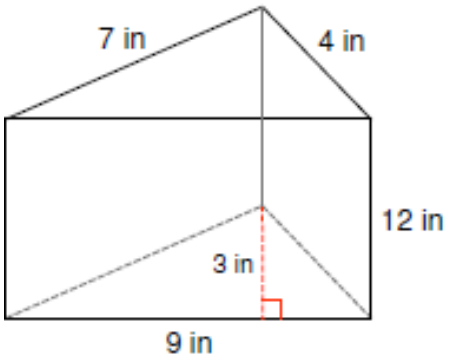
2.

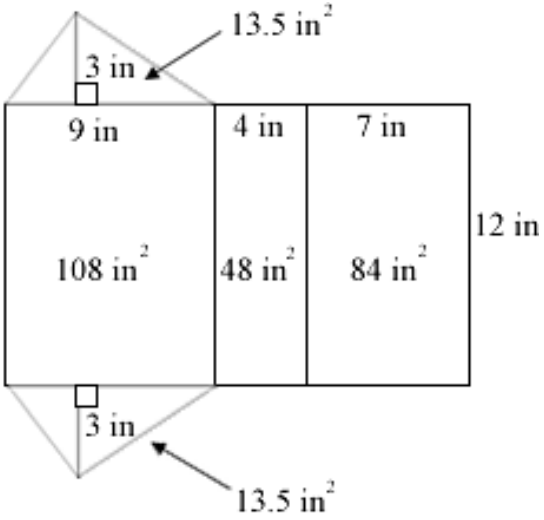




SA = 9 + 9 + 6 + 6 + 6 + 6 = 42 cm²

3.





SA = 13.5 + 13.5 + 108 + 48 + 84 = 267 in²

Figure 1:

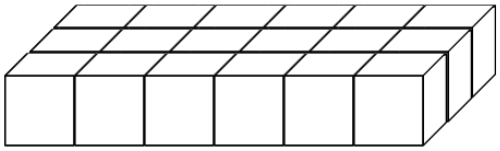


Figure 2:

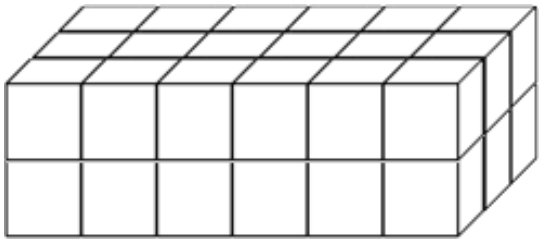
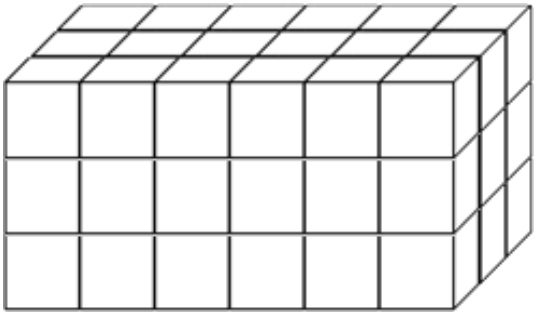


Figure 3:



Name _____ Date _____

Solve the following problems.

Given the following dimensions, find the volume of each rectangular prism.

1. l = 4 ft w = 2 ft h = 4 ½ ft

2. l = 2 cm w = 6 cm h = 7.5 cm

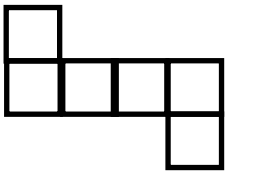
3. l = 9 in w = 10 ½ in h = 4 in

4. l = 4 ½ m w = 4.5 m h = 4.5 m

5. l = 1½ ft w = 2.5 ft h = 6.5 ft

6. A sand box is 5 ft. long 4¾ ft. wide and 1½ ft. deep. How many cubic feet of sand can it hold?

7. Find the volume.



5.5 cm

Unit 6, Activity 13, Volume with Answers

Name _____ Date _____

Solve the following problems.

Given the following dimensions, find the volume of each rectangular prism.

1. l = 4 ft w = 2 ft h = 4 ½ ft *36 ft³*

2. l = 2 cm w = 6 cm h = 7.5 cm *90 cm³*

3. l = 9 in w = 10 ½ in h = 4 in *378 in³*

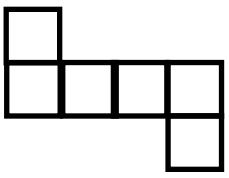
4. l = 4 ½ m w = 4.5 m h = 4.5 m *91.125 m³ or* $91\frac{1}{8}$ *m³*

5. l = 1½ ft w = 2.5 ft h = 6.5 ft *24.375 ft³ or* $24\ \frac{3}{8}$ *ft³*

6. A sand box is 5 ft. long 4¾ ft. wide and 1½ ft. deep. How many cubic feet of sand can it hold?

   35.625 ft³ or $35\frac{5}{8}$ *ft³*

7. Find the volume.



5.5 cm

5.5 × 5.5 × 5.5 = *166.375 cm³ or* $166\ \frac{3}{8}$ *cm³*

Unit 7, Activity 1, Rational Numbers

Name: _____ Date: _____

Rate your understanding of each word.

\+ means understand well
✓ means some understanding
– means don't know

Word/Phrase	+	√	–	**Example**	**Definition**
absolute value					
axis					
coordinate plane					
horizontal					
integer					
negative number					
ordered pair					
origin					
positive number					
rational number					
reflection					
vertical					

Unit 7, Activity 2, Are You Positive?

Name _____ Date _____

Write a rational number to represent each situation, then write the opposite of each situation and write the rational number to represent each new situation.

1. 10.5 degrees above zero

2. a loss of 16 ½ dollars

3. a gain of 5 points

4. 8 steps backward

Draw a number line and graph the number and its opposite.

5. -12 ½

6. 21

7. -9.75

8. 15.25

Write a situation to represent each rational number.

9. -5

10. 8.5

Name _____ Date _____

Write a rational number to represent each situation, then write the opposite of each situation and write the rational number to represent each new situation.

1.	10.5 degrees above zero	*+10.5; 10 .5 degrees below zero; -10.5*
2.	a loss of 16 ½ dollars	*-16 ½; a gain of 16 ½ dollars; +16 ½*
3.	a gain of 5 points	*+5; a loss of 5 points; -5*
4.	8 steps backward	*-8; 8 steps forward; +8*

Draw a number line and graph the number and its opposite.

5.	-12 ½	*+12 ½*
6.	21	*-21*
7.	-9.75	*+9.75*
8.	15.25	*-15.25*

Write a situation to represent each rational number.

9. -5
Answers will vary; possible answer: losing 5 yards in the football game

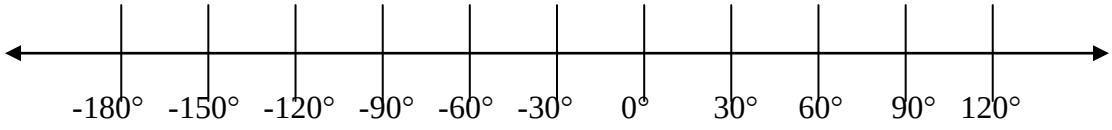
10. 8.5
Answers will vary; possible answer: depositing $8.50 in a savings account

Name _____ Date _____

The average surface temperatures of Jupiter, Mars, Earth and the moon are shown in the table.

Name	Average Surface Temperature (F°)
Jupiter	-162 F°
Moon	-10 F°
Mars	-81 F°
Earth	59 F°

1. Plot each temperature on the number line.



2. Write two inequalities using < or > symbols, comparing the surface temperatures. Write a statement to explain each inequality.

3. Would the average surface temperature on Neptune be > or < the average surface temperature on Jupiter? Explain your reasoning.

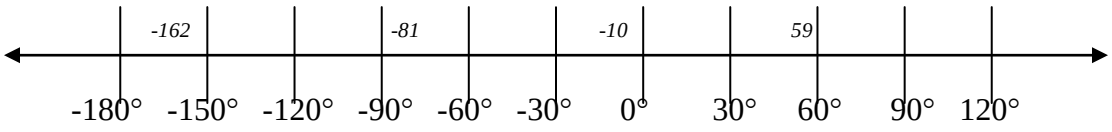
Unit 7, Activity 3, Planets with Answers

Name _____ Date _____

The average surface temperatures of Jupiter, Mars, Earth and the moon are shown in the table.

Name	Average Surface Temperature (F°)
Jupiter	-162 F°
Moon	-10 F°
Mars	-81 F°
Earth	59 F°

1. Plot each temperature on the number line.



2. Write two inequalities using < or > symbols, comparing the surface temperatures. Write a statement to explain each inequality.

   Answers will vary; Possible answers:
   -162 < -81 The farther from zero a negative number is, the smaller it is.
   59 > -10 Positive numbers are always greater than negative numbers.

3. Would the average surface temperature on Neptune be > or < the average surface temperature on Jupiter? Explain your reasoning.

   The temperature on Neptune would be less than the temperature on Jupiter because Neptune is farther from the sun than Jupiter.

1	**-1**	**2½**	**-2½**	**3**
-3	**4**	**-4**	**5**	**-5**
6.3	**-6.3**	**7**	**-7**	**8**
-8	**9**	**-9**	**10¼**	**-10¼**
11	**-11**	**12**	**-12**	**13**
-13	**14.2**	**-14.2**	**15**	**-15**

Unit 7, Activity 4, Opposites Record

Name _____ Date _____

Round	My Card	Partner Card	Inequality	Meaning of Inequality
Example	-5	-3	-5 < -3	-5 is located to the left of -3 on the number line
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Name _____ Date _____

Situation 1:

The highest and lowest temperatures ever recorded in Louisiana are –16 ºF in Minden and 114 ºF in Plain Dealing.

Which temperature is colder?

Show the temperature change on a horizontal number line.

How much colder?

Write an inequality to show the relationship between the temperatures.

Situation 2:

Ms. Jones sponsors a school club. After their pizza party last week, the bookkeeper informed her that the club account has a balance less than – 25 dollars. Is the club's debt greater than or less than 25 dollars?

Situation 3:

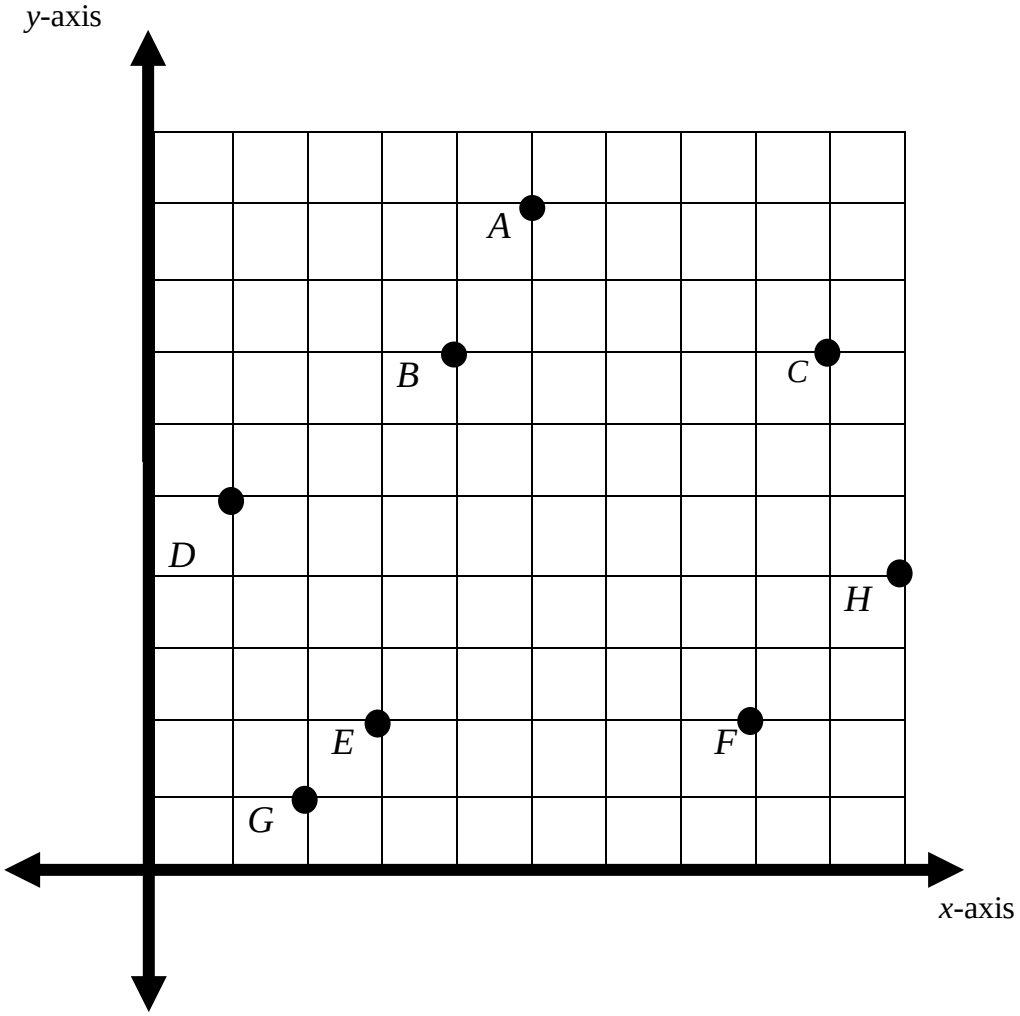
The highest point in Louisiana is Driskill Mountain at 535 feet above sea level. The lowest point in Louisiana is 8 feet below sea level in New Orleans.

Represent each number as an integer.

Show the distance on a vertical number line.

How much higher is Driskill Mountain than the lowest point in New Orleans?

Name _____ Date _____



Using the above coordinate grid, answer the following questions:

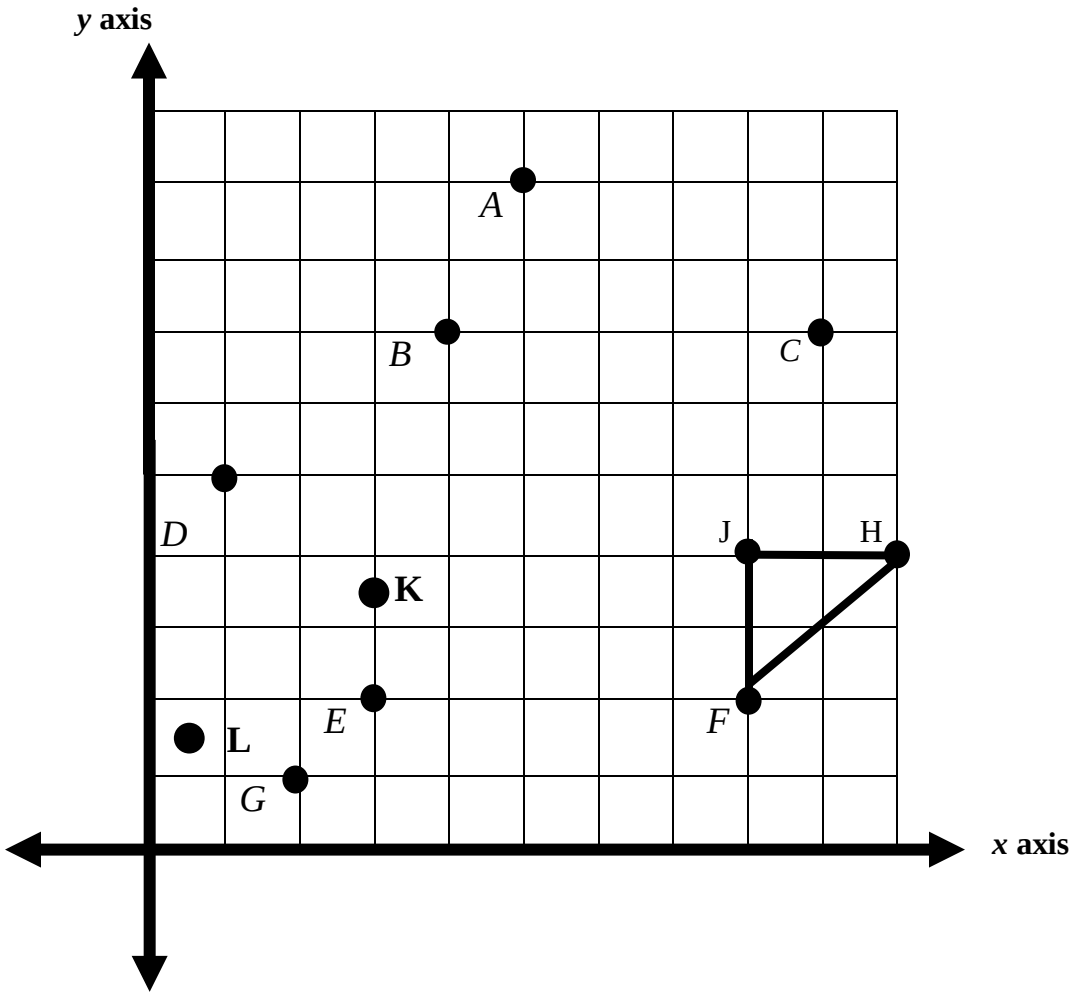
1. What are the coordinates of point D?

2. Do the coordinates (2, 5) and (5, 2) describe the location of the same point?

3. What are the coordinates of the origin? Why do you think it is called the origin?

4. Plot point (8, 4) and label it 'J'. Connect point J to F and H then connect F to H. Name the shape formed and find its area.

5. Plot point $(3, 3\frac{1}{2})$ and label it as K, and plot point (0.5, 1.5) and label it as L.



Using the above coordinate grid, answer the following questions:

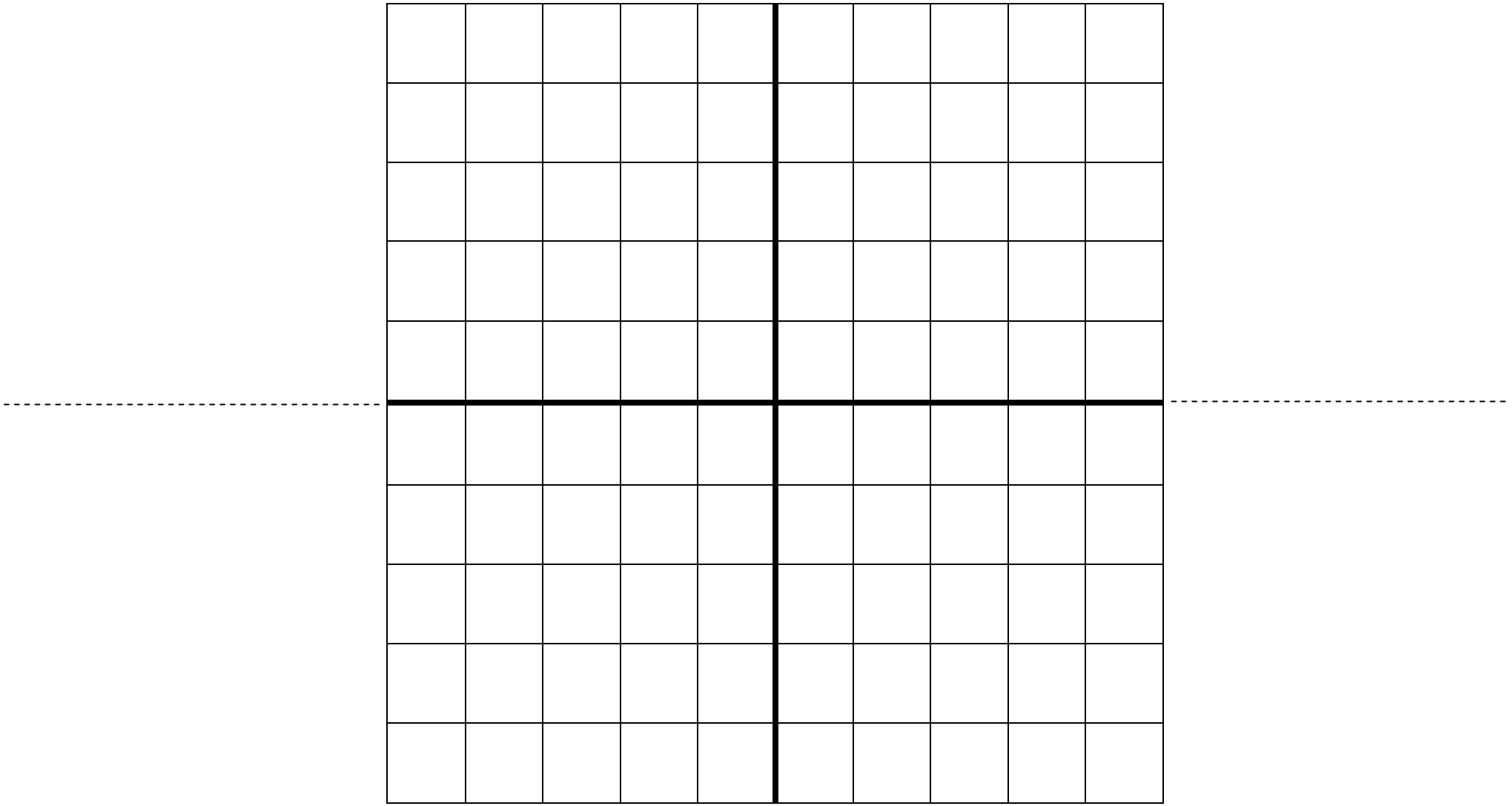
1. What are the coordinates of point D? *(1, 5)*

2. Do the coordinates (2, 5) and (5, 2) describe the location of the same point? *No, the first number describes how far to move on the x-axis and the second number describes how far to move on the y-axis.*

3. What are the coordinates of the origin? Why do you think it is called the origin? *(0,0) because it is the starting point when graphing coordinates.*

4. Plot point (8,4) and label it 'J'. Connect point J to F and H then connect F to H. Name the shape formed and find its area. *The shape is a right triangle with an area of 2 square units.*

5. Plot point $(3, 3\frac{1}{2})$ and label it as K, and plot point (0.5, 1.5) and label it as L. *(See grid above.)*



(-2, 5)	(2, 5)	(4, 4)	(4, -4)
(-1, -4)	(1, -4)	(-3, -2)	(-3, 2)
(-3, 3)	(3, 3)	(5, 2)	(-5, 2)
(2, 3)	(2, -3)	(4, -1)	(-4, -1)
(-2, -2)	(-2, 2)	(4, 5)	(-5, -4)

Unit 7, Activity 9, Ordered Pair Record

Name _____ Date _____

Ordered Pair 1	Quadrant located	Ordered Pair 2	Quadrant located	Axis reflected over

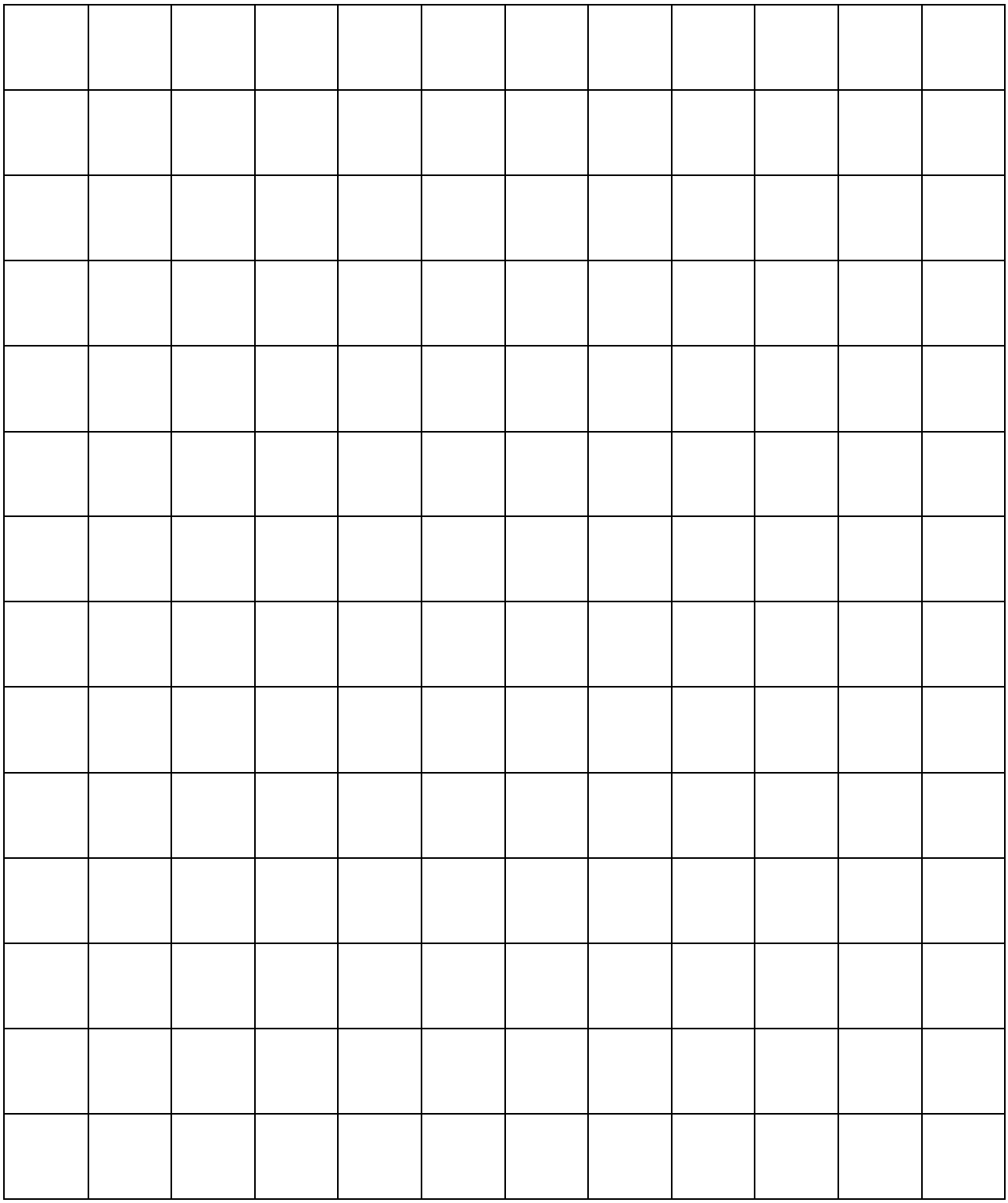
Did any ordered pairs not have a reflection? If so, which ones.

Ordered Pair 1	Quadrant located	Ordered Pair 2	Quadrant located	Axis reflected over
(-2, 5)	*II*	*(2, 5)*	*I*	*Y*
(4, 4)	*I*	*(4, -4)*	*IV*	*X*
(-1, -4)	*III*	*(1, -4)*	*IV*	*Y*
(-3, -2)	*III*	*(-3, 2)*	*II*	*Y*
(-3, 3)	*II*	*(3, 3)*	*I*	*Y*
(5, 2)	*I*	*(-5, 2)*	*II*	*Y*
(2, 3)	*I*	*(2, -3)*	*IV*	*X*
(4, -1)	*IV*	*(-4, -1)*	*III*	*Y*
(-2, -2)	*III*	*(-2, 2)*	*II*	*X*

Did any ordered pairs not have a reflection? If so, which ones and give an ordered pair that would be a reflection. *Yes*

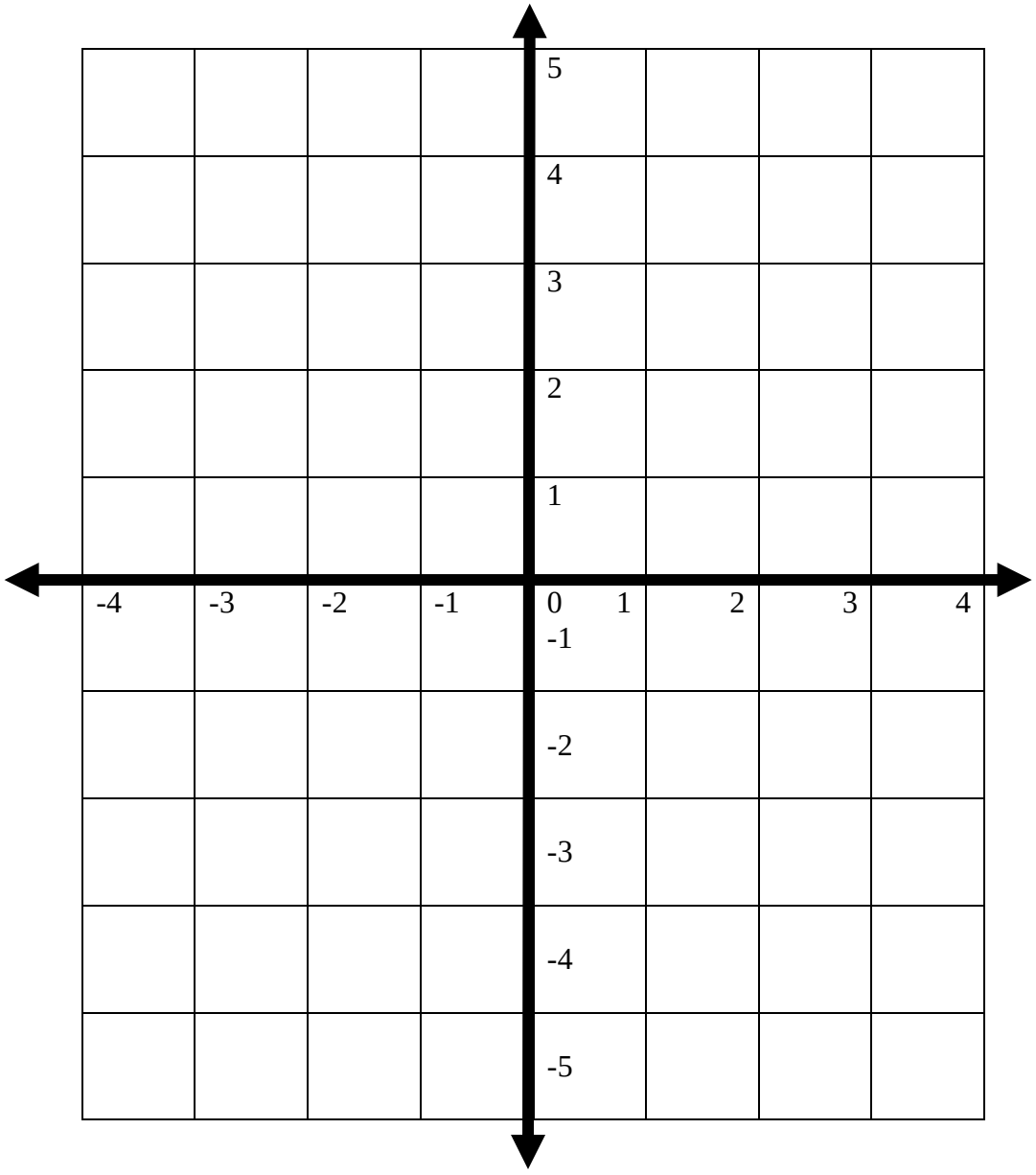
(4, 5) reflection over the x-axis would be (4, -5), over the y-axis would be (-4, 5)

(-5, -4) reflection over the x-axis would be (-5, 4), over the y-axis would be (5, -4)

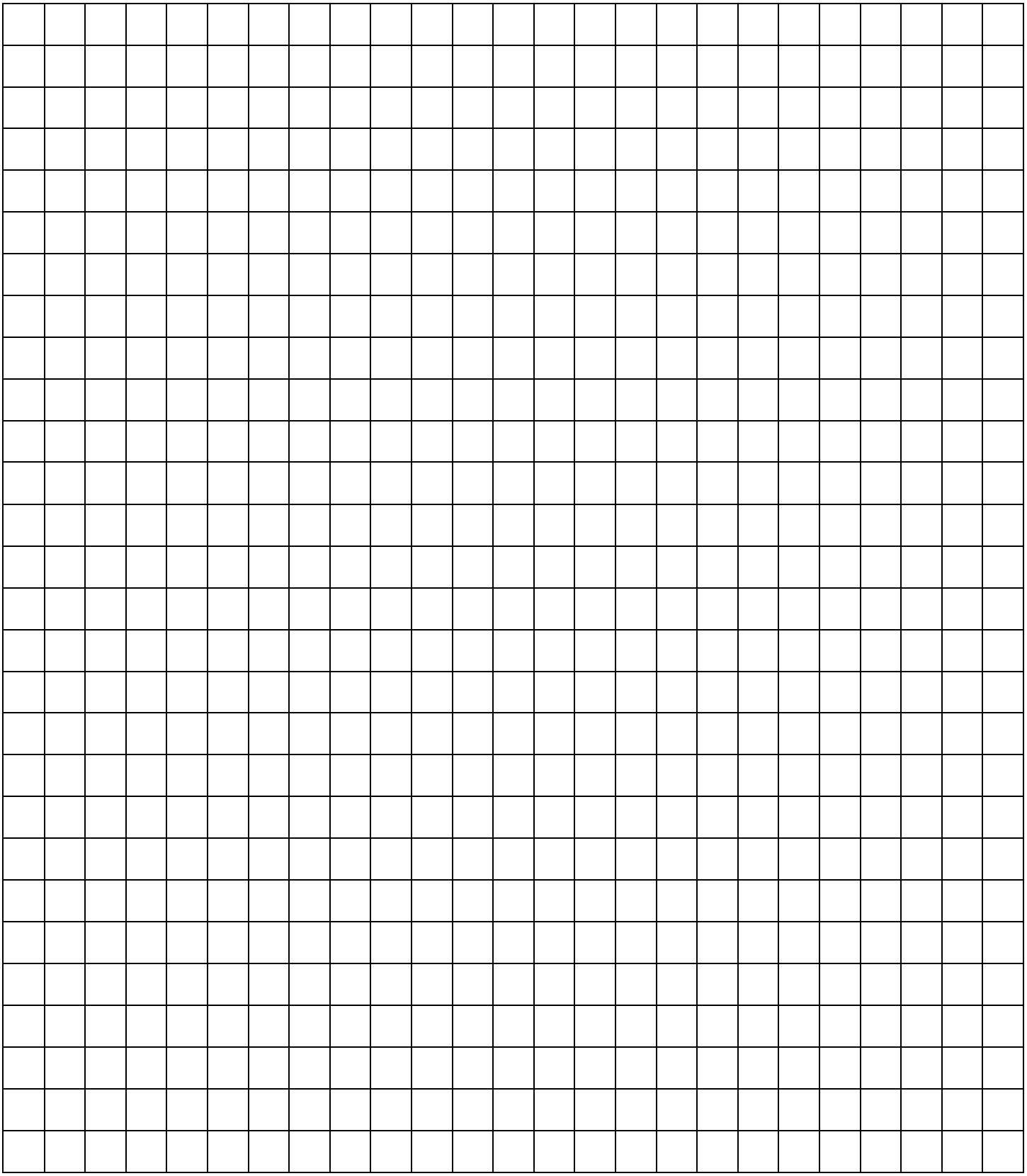


Unit 7, Activity 11, Integer Battleship

Name _____ Date _____



Unit 8, Activities 1 and 12, Graph Paper



Name _____ Date _____

Evaluate each expression.

1. $(\frac{1}{3})^3$

2. x^4, if $x = 2$

3. 5^2

4. 8.2^1

5. $(\frac{1}{2})^6$

6. 12^0

7. 3^7

8. 2.1^2

9. $(\frac{1}{4})^4$

10. x^2, if $x = 3.5$

Unit 8, Activity 2, Exponents with Answers

Name _____ Date _____

Evaluate each expression.

1. $(\frac{1}{3})^3$ $\frac{1}{27}$

2. x^4, if $x = 2$ *16*

3. 5^2 *25*

4. 8.2^1 *8.2*

5. $(\frac{1}{2})^6$ $\frac{1}{64}$

6. 12^0 *1*

7. 3^7 *2187*

8. 2.1^2 *4.41*

9. $(\frac{1}{4})^4$ $\frac{1}{256}$

10. x^2, if $x = 3.5$ *12.25*

Name _____ Date _____

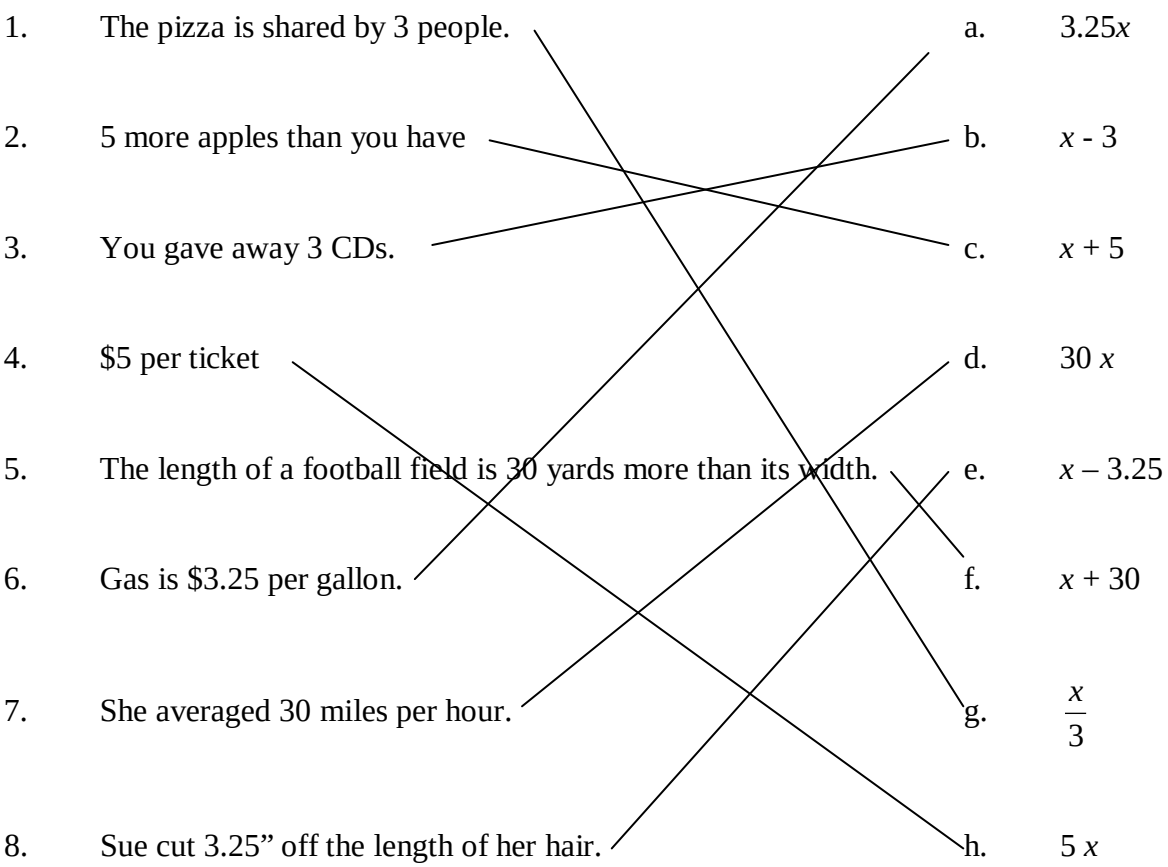
Match the verbal statements to the appropriate expression.

1.	The pizza is shared by 3 people.	a.	$3.25x$
2.	5 more apples than you have	b.	$x - 3$
3.	You gave away 3 CDs.	c.	$x + 5$
4.	$5 per ticket	d.	$30\ x$
5.	The length of a football field is 30 yards more than its width.	e.	$x - 3.25$
6.	Gas is $3.25 per gallon.	f.	$x + 30$
7.	She averaged 30 miles per hour.	g.	$\frac{x}{3}$
8.	Sue cut 3.25” off the length of her hair.	h.	$5\ x$

Unit 8, Activity 3, Match It with Answers

Name _____ Date _____

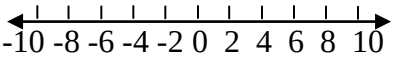
Match the verbal statements to the appropriate expression.



1.	The pizza is shared by 3 people.	a.	$3.25x$
2.	5 more apples than you have	b.	$x - 3$
3.	You gave away 3 CDs.	c.	$x + 5$
4.	$5 per ticket	d.	$30\ x$
5.	The length of a football field is 30 yards more than its width.	e.	$x - 3.25$
6.	Gas is $3.25 per gallon.	f.	$x + 30$
7.	She averaged 30 miles per hour.	g.	$\frac{x}{3}$
8.	Sue cut 3.25” off the length of her hair.	h.	$5\ x$

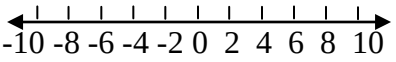
EQUAL

$x = 5$



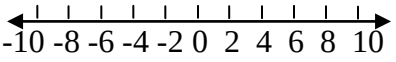
LESS THAN

$x < 10$



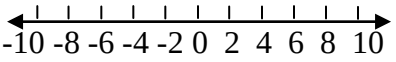
GREATER THAN

$x > -5$



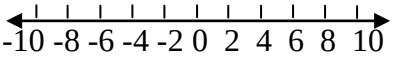
LESS THAN OR EQUAL TO

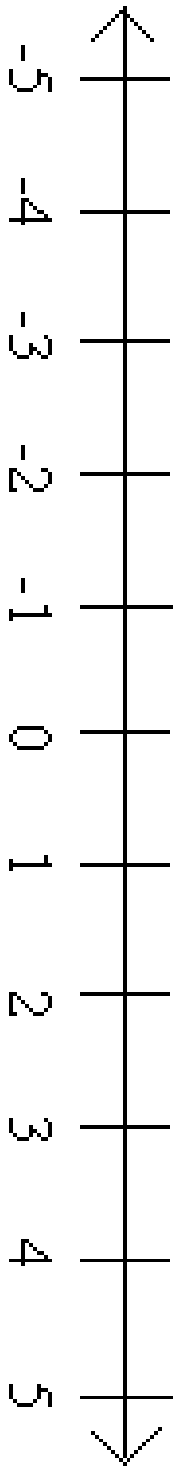
$x \leq 7$



GREATER THAN OR EQUAL TO

$x \geq 7$



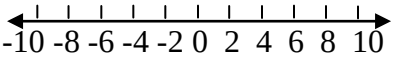

5
4
3
2
1
0
1
2
3
4
5

Unit 8, Activity 6, Graph It

Name _____ Date _____

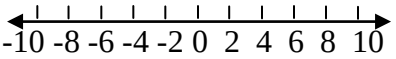
1.

$x = 3$



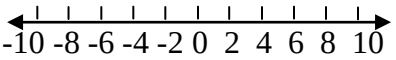
2.

$x < 7$



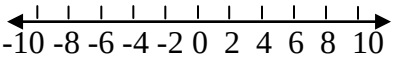
3.

$x > -6$



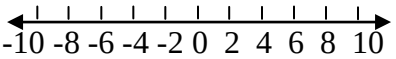
4.

$x \leq 8$



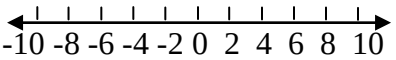
5.

$x > -4$



6.

$x \leq 5$

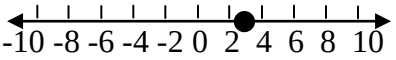


Unit 8, Activity 6, Graph It with Answers

Name _____ Date _____

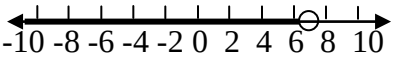
1.

$x = 3$



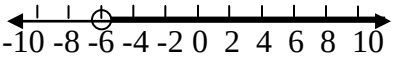
2.

$x < 7$



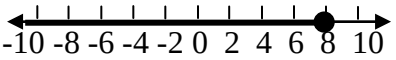
3.

$x > -6$



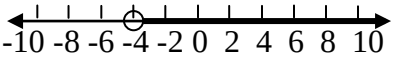
4.

$x \leq 8$



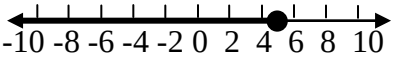
5.

$x > -4$



6.

$x \leq 5$



Unit 8, Activity 6, Equation/Inequality Word Grid

Name _____ Date _____

Situation	Equation	Inequality	Write the equation or inequality to represent each situation
John bought cheeseburgers for 5 of his friends. The total was $15.			
The movie theater has more than 285 seats.			
The Jackson family spent less than $200.00 on groceries last month.			
Sam must be at least 5 ft. to go on the ride.			
I have at most $100 in my pocket.			
The store has socks on sale. They are 6 pairs for $12.			

Seven less than a number "x"	**$x - 7$**	**Seven increased by a number "x"**	**$7 + x$**
Six less than a number "x"	**$x - 6$**	**A number "x" less than 6**	**$6 - x$**
four decreased by a number "x"	**$4 - x$**	**Four times a number "x" divided by 3**	**$\frac{4x}{3}$**
2 raised to a power of "x"	**2^x**	**A number "x" increased by 12**	**$x + 12$**

Half of a number "x"	**$\frac{x}{2}$**	**Twice a number "x" minus 4**	**2x – 4**
Four decreased by twice a number "x"	**4 – 2x**	**Six more than three times a number "x"**	**3x + 6**
72 divided by a number "x"	**$\frac{72}{x}$**	**A number "x" divided by 72**	**$\frac{x}{72}$**
Triple a number "x"	**3x**	**Three times a number "x" decreased by 4**	**3x – 4**

Word Phrase	Algebraic Expression	1st Replacement Value	Solution	2nd Replacement Value	Solution	3rd Replacement Value	Solution

Unit 8, Activity 8, Evaluate It!

Name _____ Name _____

Date _____ Date _____

Problem 1: $x + 5$ Number Rolled: _____ Work it out:	Problem 1: $x + 3$ Number Rolled: _____ Work it out:
Problem 2: $\frac{1}{2}y$ Number Rolled: _____ Work it out:	Problem 2: $\frac{1}{4}x$ Number Rolled: _____ Work it out:
Problem 3: $3n$ Number Rolled: _____ Work it out:	Problem 3: $5n$ Number Rolled: _____ Work it out:
Problem 4: $0.5z$ Number Rolled: _____ Work it out:	Problem 4: $1.4x$ Number Rolled: _____ Work it out:
Problem 5: $12x$ Number Rolled: _____ Work it out:	Problem 5: $11x$ Number Rolled: _____ Work it out:

Name _____ Date _____

Match the verbal statements to the appropriate equation.

1.	A number increased by seven is twenty-two.	a.	$n - 8 = 12$
2.	Twice a number is eight.	b.	$n - 7 = 22$
3.	A number decreased by four is twelve.	c.	$n + 7 = 22$
4.	Twelve is the difference between a number and eight.	d.	$4n = 12$
5.	Seven less than a number is twenty-two.	e.	$2n = 8$
6.	A number squared is thirty-six.	f.	$2n = 12$
7.	The product of a number and two is twelve.	g.	$n - 4 = 12$
8.	A number times four is twelve.	h.	$n^2 = 36$

Name _____ Date _____

Match the verbal statements to the appropriate equation.

1.	A number increased by seven is twenty-two.	a.	$n - 8 = 12$ *n = 20*
2.	Twice a number is eight.	b.	$n - 7 = 22$ *n = 29*
3.	A number decreased by four is twelve.	c.	$n + 7 = 22$ *n = 15*
4.	Twelve is the difference between a number and eight.	d.	$4n = 12$ *n = 3*
5.	Seven less than a number is twenty-two.	e.	$2n = 8$ *n = 4*
6.	A number squared is thirty-six.	f.	$2n = 12$ *n = 6*
7.	The product of a number and two is twelve.	g.	$n - 4 = 12$ *n = 16*
8.	A number times four is twelve.	h.	$n^2 = 36$ *n = 6*

Unit 8, Activity 9, Solving Equations

Name _____ Date _____

1. Jack had $12 to spend on four pens. How much did each pen cost?

   Equation:

   Solution:

2. You bought a book for $15, a bookmark for $3 and coffee. You spent a total of $25. How much did the coffee cost?

   Equation:

   Solution:

3. Jenny sold half of her comic books. She now has 35. How many did she start with?

   Equation:

   Solution:

4. If Randy subtracts 25 from his number, he gets 4. What is Randy's number?

   Equation:

   Solution:

5. Liz saved her weekly allowance for 4 weeks. At the end of that time, she had $60.00. How much is Liz's weekly allowance?

   Equation:

   Solution:

Unit 8, Activity 9, Solving Equations with Answers

Name _____ Date _____

1. Jack had $12 to spend on four pens. How much did each pen cost?

   Equation: $4p = 12$

   Solution: *p = 3; Each pen cost $3.*

2. You bought a book for $15, a bookmark for $3 and coffee. You spent a total of $25. How much did the coffee cost?

   Equation: $15 + 3 + b = 25$

   Solution: *b = 7; The coffee cost $7.*

3. Jenny sold half of her comic books. She now has 35. How many did she start with?

   Equation: $b \div 2 = 35$

   Solution: *b = 70; Jenny started with 70 comic books.*

4. If Randy subtracts 25 from his number, he gets 4. What is Randy's number?

   Equation: $n - 25 = 4$

   Solution: *n = 29; Randy's number is 29.*

5. Liz saved her weekly allowance for 4 weeks. At the end of that time, she had $60.00. How much is Liz's weekly allowance?

   Equation: $4w = 60$

   Solution: *w = 15; Liz's weekly allowance is $15.*

Name _____ Date _____

1. The Bike Shop rents bikes for $7 per hour plus a $10 flat fee. Julia paid $24 to rent a bike. For how many hours did she rent the bike?

   Equation:

   Solution:

2. You bought a king cake for $10 and five doughnuts. You spent a total of $25. How much did each doughnut cost?

   Equation:

   Solution:

3. Jerome sold half of his baseball cards and then bought fifteen more. He now has 35. How many did he start with?

   Equation:

   Solution:

4. If Johnny subtracts 5 from 3 times his number, he gets 4. What is Johnny's number?

   Equation:

   Solution:

5. Grace had $10.00 in her piggy bank. Then she saved her weekly allowance for 4 weeks. At the end of that time, she had $30.00. How much is Grace's allowance?

   Equation:

   Solution:

Unit 8, Activity 10, Two-Step Equations with Answers

Name _____ Date _____

1. The Bike Shop rents bikes for $7 per hour plus a $10 flat fee. Julia paid $24 to rent a bike. For how many hours did she rent the bike?

   Equation: *7h + 10 = 24*

   Solution: h = *2; Julia rented the bike for 2 hours.*

2. You bought a king cake for $10 and five doughnuts. You spent a total of $25. How much did each doughnut cost?

   Equation: *10 + 5d = 25*

   Solution: *d = 3; Each doughnut costs $3.00.*

3. Jerome sold half of his baseball cards and then bought fifteen more. He now has 35. How many did he start with?

   Equation: *b ÷ 2 + 15 = 35*

   Solution: *b = 40; Jerome started with 40 baseball cards.*

4. If Johnny subtracts 5 from 3 times his number, he gets 4. What is Johnny's number?

   Equation: $3n - 5 = 4$

   Solution: *n = 3; Johnny's number is 3.*

5. Grace had $10.00 in her piggy bank. Then she saved her weekly allowance for 4 weeks. At the end of that time, she had $30.00. How much is Grace's allowance?

   Equation: *10 + 4w = 30*

   Solution: *w = 5; Grace's allowance is $5 a week.*

Unit 8, Activity 12, Input-Output Tables

Name _____ Date_____

Complete the input/output tables below with the values 1 – 10. Plot your values on the graph paper.

1. $5x = y$

Input x	1	2	3	4	5	6	7	8	9	10
Output										

Show your work in the space below.

2. $x^2 = y$

Input x	1	2	3	4	5	6	7	8	9	10
Output										

Show your work in the space below.

3. $2x + 8 = y$

Input x	1	2	3	4	5	6	7	8	9	10
Output										

Show your work in the space below.

Unit 8, Activity 12, Input-Output Tables with Answers

Name _____ Date_____

Complete the input/output tables below with the values 1 – 10. Plot your values on the graph paper.

1. $5x = y$

Input x	1	2	3	4	5	6	7	8	9	10
Output	*5*	*10*	*15*	*20*	*25*	*30*	*35*	*40*	*45*	*50*

Show your work in the space below.

2. $x^2 = y$

Input x	1	2	3	4	5	6	7	8	9	10
Output	*1*	*4*	*9*	*16*	*25*	*36*	*49*	*64*	*81*	*100*

Show your work in the space below.

3. $2x + 8 = y$

Input x	1	2	3	4	5	6	7	8	9	10
Output	*10*	*12*	*14*	*16*	*18*	*20*	*22*	*24*	*26*	*28*

Show your work in the space below.