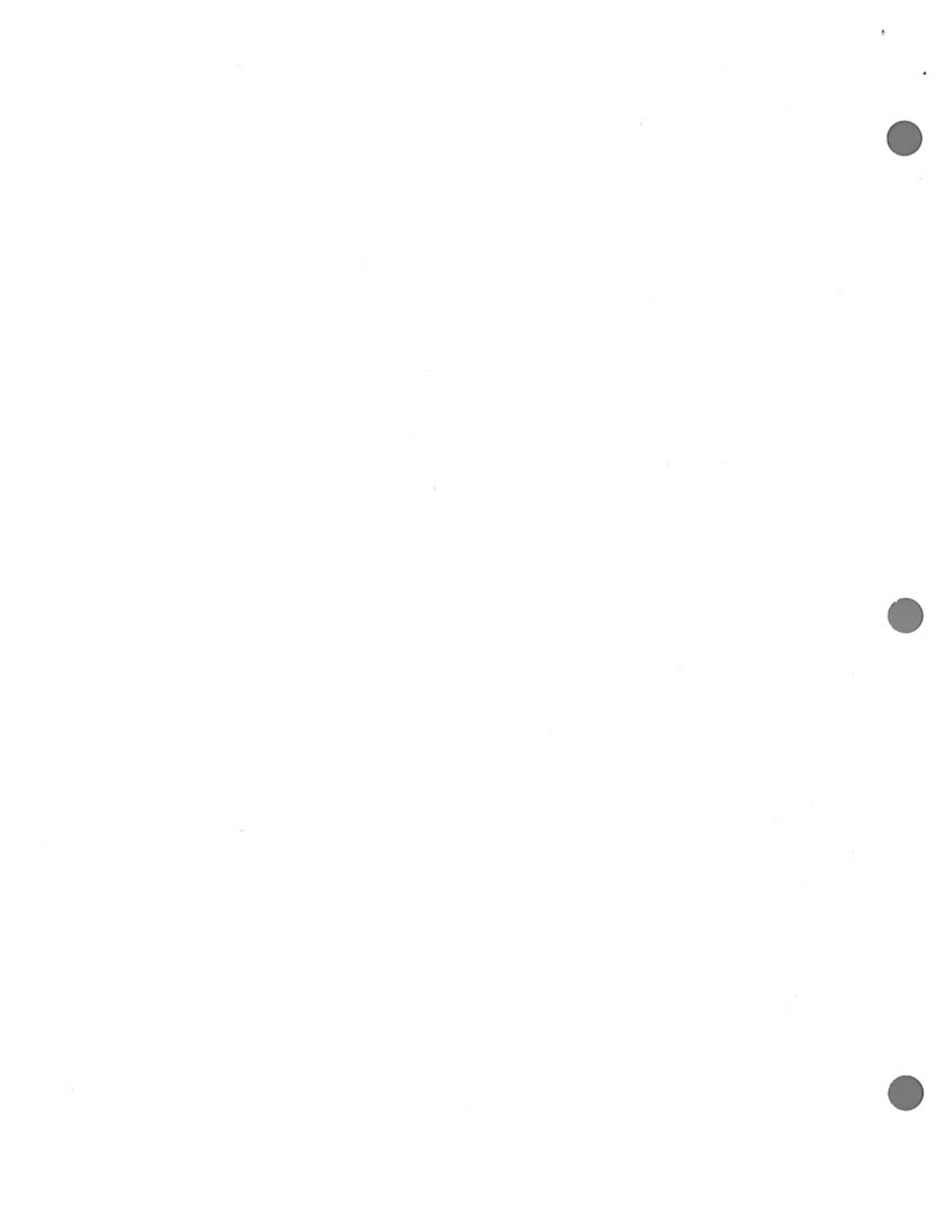


Mrs. Rutherford

rrutherford@horseheadsdistrict.com

Checklist:

- Workbook: Units 1-4
 - Workbook: Units 5-7
 - Workbook: Units 8-10
 - Math Binder
 - Review Packet
-



Name _____

Date _____

Math 7 Accel - Unit 1 Review

Period _____

Circle the correct answer for each multiple choice. Show work.

- The temperature at 9:00 P.M. was 16°C . The temperature dropped 3°C per hour. What was the temperature at 2:00 A.M.?
A. -1°C C. 1°C
B. -13°C D. 13°C
- Which list shows the integers in order from least to greatest?
A. $0, -1, -2, 4, 5$
B. $-2, -1, 0, 4, 5$
C. $0, 5, 4, -2, -1$
D. $-1, -2, 0, 4, 5$
- Which of the following has the greatest value?
A. $|1|$ C. $-|5|$
B. 0 D. $|-3|$
- When $a = -9$ and $b = -6$, which expression has a value of -3 ?
A. $a + b$ B. $|a + b|$
C. $a - b$ D. $|a - b|$
- What is the value of the expression below?
 $|24 \div (-3)| + |-14 \div 2|$
A. 1 C. 15
B. -1 D. -15

Find the value of each.

6. $|7|$

7. $|-18|$

8. $-|13|$

Find the value of each. Show work.

9. $|7 - 9|$

10. $|-3 + 8|$

11. $-|4 - 5|$

Complete the statement using $<$, $>$, or $=$. Show work.

12. $|-5|$ _____ -7

13. $|2|$ _____ $|-2|$

Evaluate the Expression. Show all work.

14. $-6 \cdot 7 - (-16) \div 8$

15. $\frac{-12 \cdot (-2)}{6}$

Find the mean of the integers. Show all work.

16. $-6, 4, -2, -8$

17. Explain how to determine if a product is positive or negative. Write an explanation then give an example of a positive product and an example of a negative product.

Name _____

Date _____

Math 7 Accel - Unit 2 Review

Period _____

Write the rational number as a decimal. Show work.

1. $2\frac{2}{5} =$ _____

2. $-\frac{7}{3} =$ _____

Write the decimal as a fraction or mixed number in simplest form. Show work.

3. $4.6 =$ _____

4. $-0.24 =$ _____

5. $-2.4 =$ _____

6. Your skateboard ramp is $3\frac{3}{4}$ feet high. Your friend's skateboard ramp is $3\frac{2}{5}$ feet high. Which skateboard ramp is higher? Show work to support your answer.

Add or subtract. Write fractions in simplest form. Show all work.

7. $-\frac{5}{3} + 2\frac{1}{3}$

8. $-5.75 - (-3.4)$

Multiply or divide. Write fractions in simplest form. Show all work.

9. $(-0.6)\left(-1\frac{1}{6}\right)$

10. $-2\frac{2}{3} \div \frac{8}{12}$

11. How many $\frac{2}{3}$ ounce packages of peanuts can be made with 8 ounces of peanuts? Show all work.

Name _____

Date _____

Math 7 Accel - Unit 3A Review

Period _____

Find the sum or difference. Show ALL work.

1. $(6x - 2) + (3x - 4)$

2. $(5y + 6) - (3y - 3)$

3. $(-7a + 5) + 3(2a - 4)$

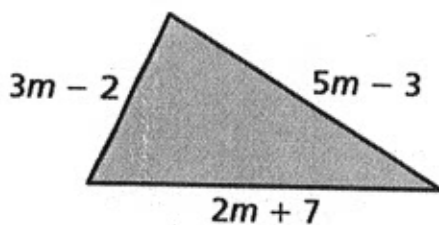
4. $\frac{1}{2}(8x - 6) - 2(3 - 4x)$

Factor the following expressions. Show ALL work.

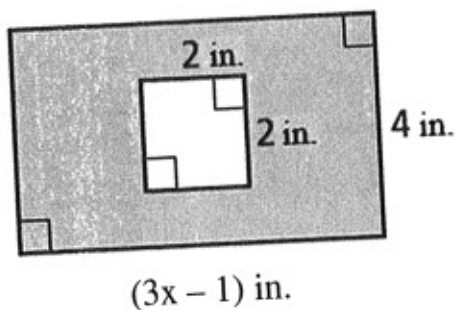
5. $8x - 64$

6. $4x + 24xy$

7. Write an expression in simplest form that represents the perimeter of the polygon.



8. Write an expression in simplest form that represents the area of the shaded region.



Translate each of the following into an algebraic expression. Show ALL work.

9. The sum of a number, x , and 6. _____

10. Four more than three times a number, x . _____

11. Twelve less than the product of a number, x , and 4. _____

12. The quotient of ten and a number, x , less 8. _____

Evaluate the expression if $x = \frac{1}{3}$ and $y = -5$. Show ALL work.

13. $9xy + 2y$

Name _____

Date _____

Math 7 Accel - Unit 3B Review

Period _____

Multiple Choice: Show work to support your answer.

1. Which of the following equations is equivalent to the equation $-3(-4x - 5) = 45$?

A. $12x + 15 = 45$

C. $-12x - 15 = 45$

B. $12x - 15 = 45$

D. $-12x + 15 = 45$

2. Which of the following describes a correct method for solving the equation below?

$$5 - \frac{2}{3}x = -5$$

A. Add 5 to both sides, then divide both sides by $-\frac{2}{3}$.

B. Subtract 5 from both sides, then multiply both sides by $-\frac{2}{3}$.

C. Subtract 5 from both sides, then multiply both sides by $-\frac{3}{2}$.

D. Add 5 to both sides, then divide both sides by $-\frac{3}{2}$.

Write the word sentence as an equation. Show ALL work.

3. 7 less than a number y is negative 2. _____

4. The sum of a number y and 4 is -8. _____

5. Four times the difference of -3 and y is 11. _____

6. Half of a number y is equal to 13. _____

Solve the equation. Check your solution. Show ALL work.

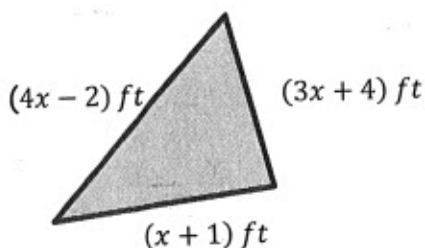
7. $-8.7 = a + 4.6$

Solve the equation. Check your solution. Show ALL work.

8. $\frac{1}{4}(8x + 12) = 27$

9. $-7 = \frac{x}{2} + 3$

10. Write an equation in simplest form to find the value of x if the perimeter of the triangle is 75 feet.



a) Equation: _____

b) Solve for x : Show ALL work.

11. Lexi joined a food club. She paid a yearly membership fee of \$420 that covers all the club's services except the delivery fee for each order. Lexi paid \$10 each time she received a delivery. For the entire year, Lexi paid a total of \$570.

Part A Write an equation to represent the problem. Use d to represent the number of times Lexi had a delivery.

Equation _____

Part B Solve the equation you wrote in Part A to find how many times Lexi had a delivery.

Show your work.

Lexi had food delivered _____ times.

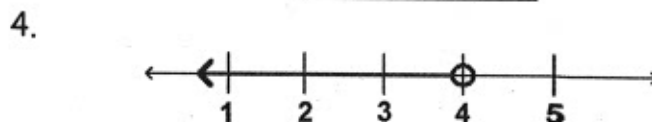
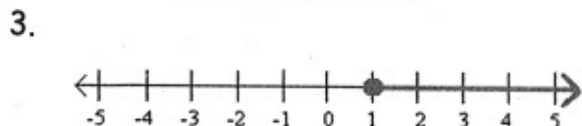
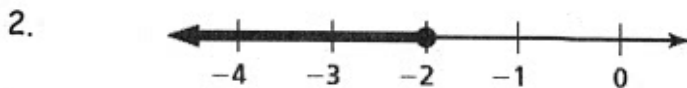
Name _____

Date _____

Math 7 Accel - Unit 4 Review

Period _____

Write an inequality for the graph.



Write the word sentence as an inequality. Show ALL work.

5. A number y plus 7 is less than 45. _____

6. A number x divided by -1 is at least -4 . _____

7. The people in the boat, p , are no more than 30 years old. _____

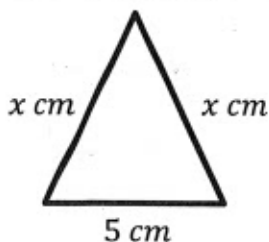
8. The minimum cost, c , for parking is \$3. _____

Explain whether the given value is a solution of the inequality. Show ALL work.

9. $-3 < \frac{x}{2}$; $x = -1$

10. $-2x + 1 < 5$; $x = -1$

11. An isosceles triangle has a base of 5 centimeters and legs x centimeters long. The perimeter is no less than 37 centimeters. Write and solve an inequality to find the possible values of x . Show ALL work.



12. An elevator can carry 800 pounds of weight at most.

a. A student weighing 95 pounds gets on the elevator. Write an inequality to represent the remaining weight that can be added to the elevator.

b. Can two more football players weighing a total of 700 pounds get onto the elevator with the first student and still be within the weight requirements? Explain.

Solve and graph the inequality. Show ALL work.

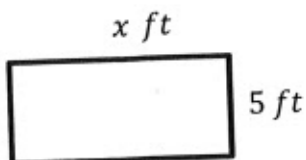
13. $x + 2 \leq -4$

14. $4x - 3 \geq -1$

15. $6 > -3(x + 2)$

Write and solve an inequality that represents all the possible values of x . Show ALL work.

16. The area is more than 15 feet squared.



Name _____

Date _____

Math 7 Accel - Unit 5 Review

Period _____

Read directions for each problem carefully.

1. Which ratio is a unit rate? Select all that apply.

a. $\frac{1\frac{1}{2} \text{ pickles}}{1 \text{ person}}$

b. $\frac{23\frac{2}{5} \text{ pounds}}{1 \text{ box}}$

c. $\frac{9 \text{ cans}}{2 \text{ bags}}$

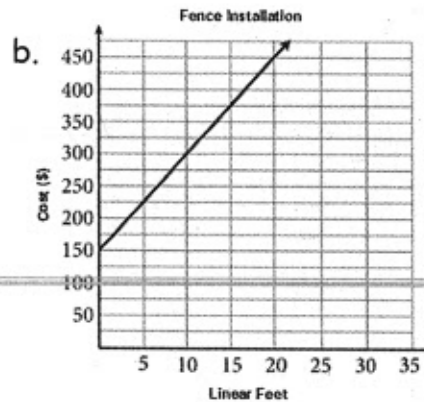
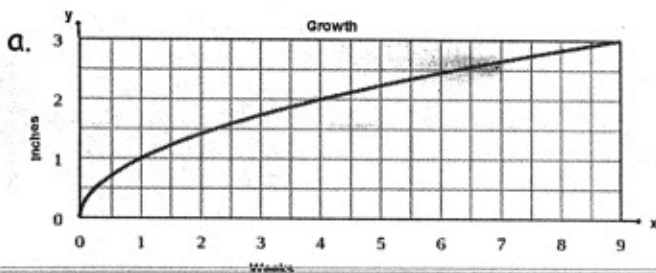
d. $\frac{3\frac{1}{4} \text{ cups sugar}}{1\frac{1}{2} \text{ tpoons salt}}$

e. $\frac{\$16.25}{3 \text{ hours work}}$

2. A pool is being filled with water at a rate of 2 gallons per minute. How many quarts per minute is this? Show work.

- a. 1 quart/minute
- b. 3 quarts/minute
- c. 4 quarts/minute
- d. 8 quarts/minute

3. Which of the following shows a proportional relationship? Show work.



c.

Cost (y)	\$5	\$7.50	\$12.50
Pounds (x)	2	3	5

d.

Hours	Miles
2	106
3	159
4	212
5	260

4. Which situation represents a proportional relationship?
- A recipe uses 1 tablespoon of sugar for every 1 to 2 cups of flour.
 - Marc jogs between 5 and 8 miles every 2 to 3 days.
 - It snowed 2 inches every hour.
 - There is one table for every 6 to 8 chairs.

5. Jax uses the recipe shown for a science experiment.

Jax's Science Recipe

$3\frac{4}{5}$ fluid ounces water

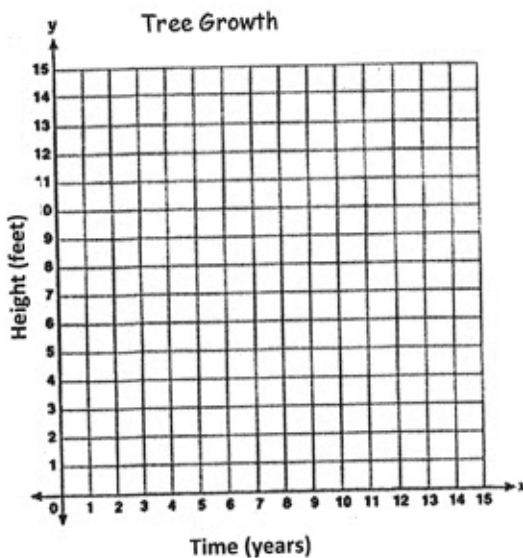
$1\frac{1}{5}$ fluid ounces red dye

How much red dye will he need to make 125 fluid ounces of his mix. Show all work.

6. The table below shows the amounts, in feet, a tree grew over time, in years.

Height (feet)	2	4	6
Time (years)	1	2	4

- a. Graph the data.



- b. Does your graph show proportional relationship? Explain.

7. The table show the cost for different size bags of Timothy Hay for rabbits.

Store	Bag Size	Cost (\$)
Petco	24 oz	\$3.99
PETSMART	40 oz	\$9.77
Walmart	96 oz	\$14.58



a. Determine the unit rate for each bag. Show all work.

b. Which bag is the best deal? Explain how you know.

8. At a park, 384 visitors rode the Merry-go-round in 2 hours. Write and solve a proportion to find the number of visitors, at this rate, who will ride the merry-go-round in 5 hours. Show all work.

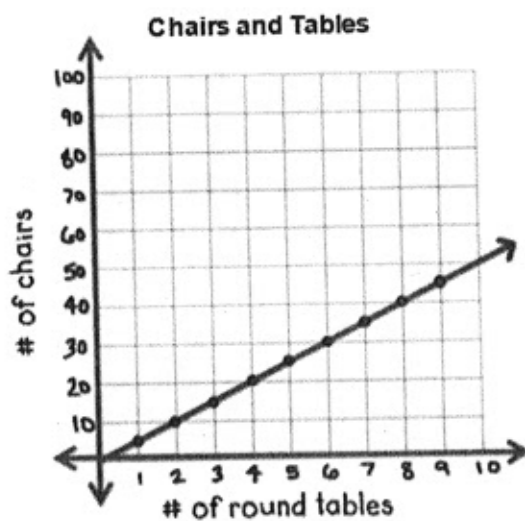
9. Ava rode her bike $2\frac{1}{2}$ miles in $\frac{1}{4}$ hour. How many miles per hour does Ava ride her bike? Show all work.

10. Mrs. Camidge bought 8 packs of colored pencils for her classroom for a total of \$31.92. She later realized she needed 3 more packs of colored pencils. How much will the extra packs of pencils cost? Show all work.

11. The graph shows the number of chairs and tables needed for a party.

a. Find the unit rate. Show work.

b. Use the unit rate to write the equation of this line.



Name _____

Date _____

Math 7 Accel - Unit 6 Review

Period _____

Read each problem carefully. Show work & a formula for each problem.

1. Sam sold a bike that cost \$160.75. If he earns a commission rate of 3% of his total sales, how much will he earn from the sale of the bike?
 - a. \$4.82
 - b. \$48.22
 - c. \$482.25

2. Tom went to a yard sale and bought some baseball cards. He started out with 18 baseball cards and now has 26. What is the percent of change to the nearest whole percent in Tom's baseball card collection?
 - a. 31% increase
 - b. 44% increase
 - c. 31% decrease
 - d. 44% decrease

3. Steve expected to get \$75 for babysitting. He only got \$60. What is his percent error to the nearest whole percent?
 - a. 20% error
 - b. 25% error
 - c. 80% error
 - d. 125% error

4. Max deposited \$1,200 in a new bank account that earns 3.25% simple interest. If Max makes no additional deposits or withdrawals, how much will be in his account after 3 years?
 - a. \$117
 - b. \$1,317
 - c. \$11,700
 - d. \$12,900

For each of the following problems, show a formula and ALL work.

5. The original price of an art set was \$15. It is on sale for \$6. What is the percent of discount?

6. A store paid \$210 for a PS4 gaming system. They marked the price up 90%. What is the selling price of the PS4 gaming system?

7. You are shopping for a TV. A TV at Target is on sale for \$750. The same model TV costs \$900 at Best Buy and is on sale for 30% off. At which store should you buy the TV? Show all work and explain your answer.

Name _____

Date _____

Math 7 Accel - Unit 7A Review

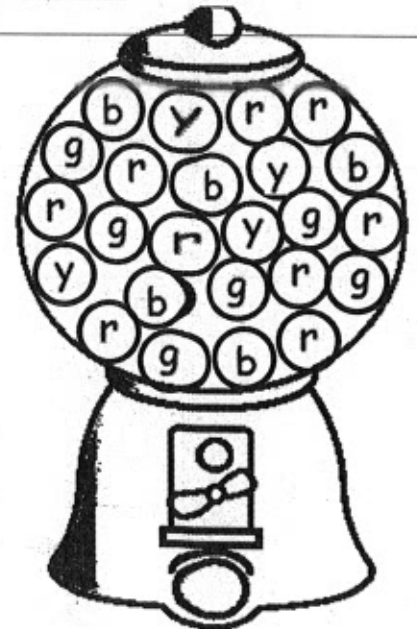
Period _____

Read each problem carefully. Show all work for each problem.

You buy a gumball from the machine and receive a random color. Find the theoretical probability of the event.

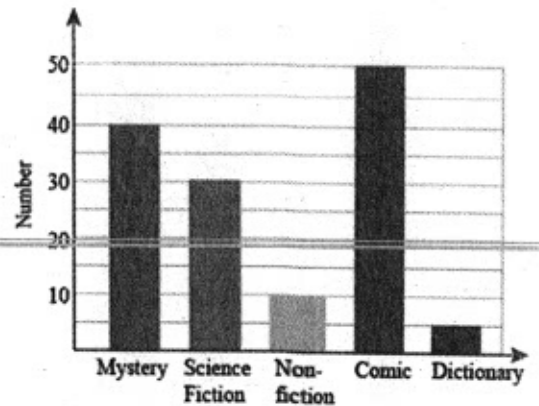
1. Receiving a blue gumball
2. Not receiving a green gumball
3. Receiving a yellow, green, blue, or red gumball

red = r
blue = b
yellow = y
green = g



You choose a book of the bookshelf. Use the table to find the experimental probability of the event.

4. Choosing a comic book
5. Choosing a mystery or dictionary
6. Choosing science fiction or poetry

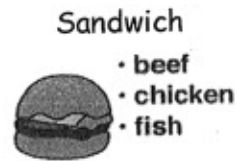


7. There are 660 students at Horseheads Middle School. The results of a random survey show that 15 out of 45 students like eating lunch at 10:45 a.m.

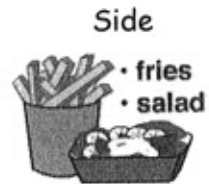
a. What is the experimental probability that a chosen student likes eating lunch at 10:45 a.m.?

b. How many of the 660 students would be expected to prefer eating lunch at 10:45 a.m.?

8. Draw a tree diagram to find the sample space and the total number of possible outcomes.



Choose one of each



9. Use the Fundamental Counting Principle to find the total number of possible outcomes.

Breakfast Menu
Pick 3 for \$4.99!!



Choice 1:

- Pancakes
- French Toast

Choice 2:

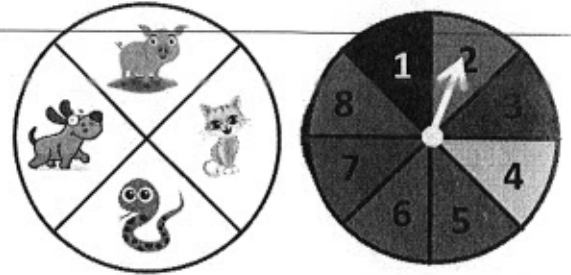
- Bacon
- Sausage
- Scrambled Eggs
- Hash Browns

Choice 3:

- Orange Juice
- Apple Juice
- Coffee
- Milk

You spin each spinner once. Find the probability of the compound event.

10. Spinning a pig then a 2



11. Spinning a dog then an even number

12. Spinning an animal with four legs then a number less than 3

13. Your lunch number is 7 digits long. How many different lunch numbers are possible?

14. You have a bag of Starbursts that contains 8 red, 2 yellow, 4 pink, and 6 orange. You reach into the bag without looking, pull out a Starburst, and eat it. Then you pull out a second Starburst. What is the probability that the first Starburst was red and the second was pink?

15. How many ways can you arrange the letters in JULIET if the J must be first?



Name _____

Date _____

Math 7 Accel - Unit 7B Review

Period _____

1. Mrs. Rutherford wants to determine which class students in the school like the most. She chooses students to survey. Which of the samples below is a random sample?
- a. Choose the 50 students in choir.
 - b. Choose every 10th student who enters school in the morning.
 - c. Choose 50 students in PONY.
 - d. Choose the 24 students in her first period math class.

2. Which of the following is an appropriate display to show the number of cars sold in the last 6 months?
- A. bar graph
 - B. circle graph
 - C. line graph
 - D. histogram

Explain your answer: _____

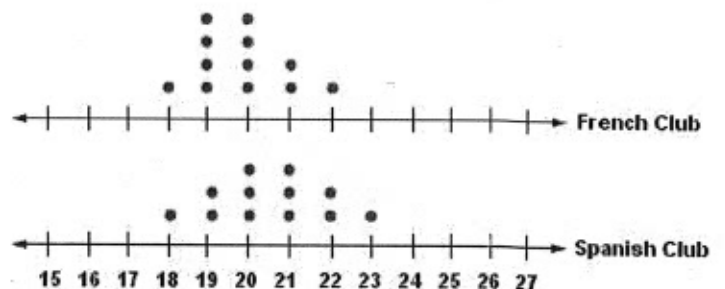
3. Which of the following is an appropriate display to show the total number of each color in a class set of colored pencils?
- A. bar graph
 - B. circle graph
 - C. line graph
 - D. histogram

Explain your answer: _____

4. Which can be determined for two populations from a dot plot?
- a. Mean
 - b. Range
 - c. Median
 - d. All of the above

5. Two sets of data are graphed on the line plot. What observation can you make about the two data sets?

- a. Both have the same range.
- b. Both have a median of 20.
- c. Both have a minimum of 18.
- d. Both have a maximum of 23.



6. A recent survey of 220 students from Horseheads Middle School shows 3 out of 5 students participate in an afterschool activity.
- What is the population in the survey?
 - What was the sample for the survey?
 - If there are 650 students in Horseheads Middle School, predict how many students participate in an afterschool activity. **Show Work.**

7. The results of a survey asking teens their favorite type of book to read is shown in the graph.

Out of 250 teens, predict how many would choose Science Fiction as their favorite type of book to read.

Favorite Type of Book



8. Consider the following data sets

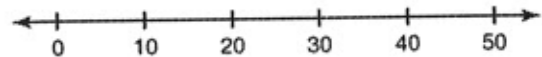
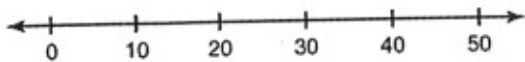
Set 1: 15, 25, 4, 15, 35, 4, 12, 20

Part A. Find the five-number summary for the data.

Minimum: Maximum: Median: Q1: Q3:

Part B: Make a dot plot of the data.

Part C: Make a box plot of the data.



Part D: Find each of the following. **Show Work.**

1. Mean: _____

2. Range: _____

3. IQR: _____

9. Jane gathered samples for the points scored for two basketball teams. The data is shown in the table below:

	Team A	Team B
Minimum:	45	49
Q1:	52	53
Median:	56	57
Q3:	64	63
Maximum:	70	72

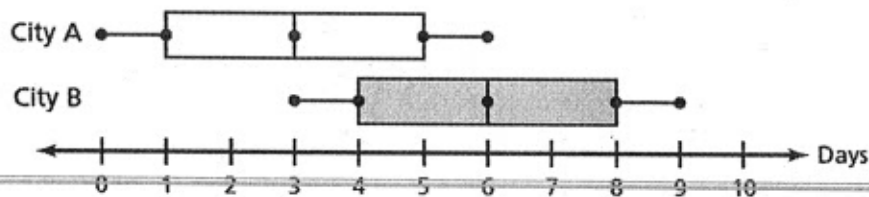
A. What is the total range for Team A?

B. What is the IQR for Team A?

C. What is the total range for Team B?

D. What is the IQR for Team B?

10. The double box-and-whisker plot shows the number of inches of snow per week in two cities in a 16-week period.



What can you conclude about the two groups?

- They have the same minimum.
- They have the same maximum.
- They have the same IQR.
- They have the same mean.

11. When is the mean a misleading measure of the center of a set of numbers?



Name _____

Date _____

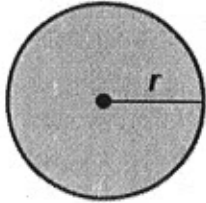
Math 7 Accel - Unit 8 Review

Period _____

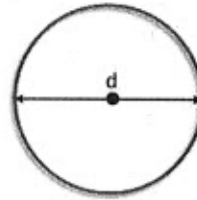
Use pi button for π . Round answers to the nearest hundredth.

Write and solve an equation to find the missing dimension of the circle.

1. Diameter = 18 m (3 pts)
Radius = ?

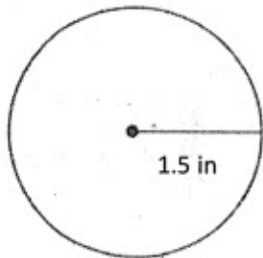


- Radius = 220 yd (3 pts)
Diameter = ?



Find the circumference AND area of the circle. State your answer in terms of π .

2.



Circumference (5 pts)

Area (5 pts)

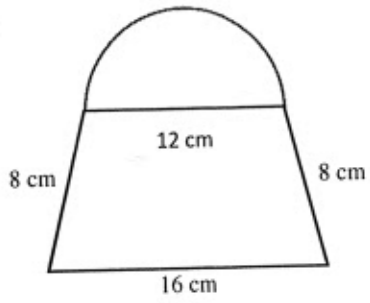
3. A coin has a circumference of about 6π millimeters.

a. What is the radius of the coin? (3 pts)

b. What is the area of the coin? (3 pts)

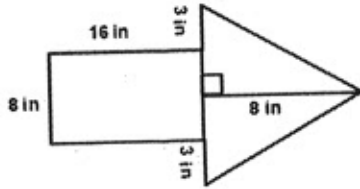
Find the perimeter OR area of the figures below.

4.



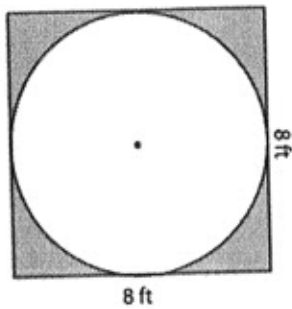
Perimeter (5 pts)

5.



Area (5 pts)

6. Find the area of the shaded region of the figure. (8 pts)



Name _____

Date _____

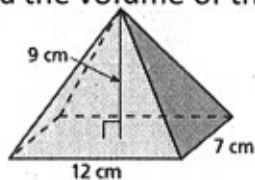
Math 7 Accel - Unit 9 Review

Period _____

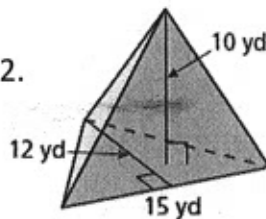
Read directions carefully. Show ALL work for every problem.

Find the volume of the pyramid.

1.



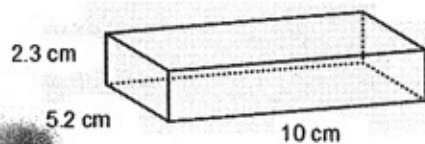
2.



Volume = _____

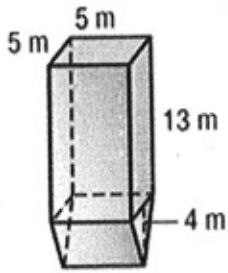
Volume = _____

3. Find the surface area of the prism.



Surface Area = _____

4. Find the volume of the composite solid.

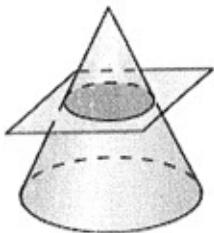


5. The volume of a pyramid is 42 cubic yards. The area of the base is 31.5 square yards. Find the height of the pyramid.

6. A tree house is in the shape of a square pyramid with a side length 6 feet and a slant height of 10 feet. The wood used to build the walls of the tree house costs \$4.25 per square foot. What is the cost of the wood for the walls of the tree house?

Describe the intersection of the plane and the solid.

7.



8.

