MATH 7 REVIEW PACKETS

Packet 1 (Number Sense & Expressions)

- Integers & Absolute Value
- Add, Subtract, Multiply, and Divide Integers
- Integer Operations Word Problems
- Add, Subtract, Multiply, and Divide Fractions
- Fraction Operations Word Problems
- Exponents
- Fraction, Decimal, and Percent Conversions
- Comparing & Ordering Numbers (written in various forms)
- Order of Operations
- Properties

Packet 2 (Expressions, Equations, & Inequalities)

- Evaluating Expressions
- Simplifying Expressions (Distribute and/or Combine Like Terms)
- Solving One-Step Equations
- Solving Two-Step Equations
- Solving Multi-Step Equations
- Translating Equations
- Equation Word Problems
- Graphing Inequalities
- Solving & Graphing One-Step
- Solving & Graphing Two-Step Inequalities
- Translating Inequalities
- Inequality Word Problems

Packet 3 (Ratios, Proportions, & Percents)

- Ratios & Rates
- Solving Proportions
- Proportion Word Problems
- Scale Drawings & Models
- Similar Figures
- Indirect Measurement
- Percent Proportion
- Discount, Mark-up, Sales Tax, and Tip Problems
- Commission
- Percent Increase and Percent Decrease
- Simple Interest

Packet 5 (Measurement & Geometry)
• Vertical and Adjacent Angles • Complementary and Supplementary Angles • Triangle Sum Theorem • Classifying Triangles by Sides and Angles • Determine the Number of Possible Triangles (given certain measures) • Properties of Quadrilaterals/Classifying Quadrilaterals • Congruent Polygons • Area and Perimeter of Plane Figures (Squares, Rectangles, Parallelograms, Triangles, Trapezoids) • Circumference of Circles • Area of Circles • Perimeter and Area of Composite Figures • Surface Area of Rectangular Prisms, Triangular Prisms, and Cylinders • Volume of Rectangular Prisms, Triangular Prisms, and Cylinders • Surface Area and Volume Applications

Packet 6 (Probability & Statistics) (Unit 8)
• Theoretical Probability • Experimental Probability • Comparing Theoretical & Experimental Probability • Tree Diagrams • Counting Principle • Compound Probability (Independent Events Only) • Biased vs. Unbiased Sampling • Using Samples to Predict • Measures of Central Tendency • Stem-and-Leaf Plots • Histograms • Box-and-Whisker Plots

Name: _____ **Math 7 Review:** Packet #1

Topic #1: Integers and Absolute Value

Directions: Find each sum, difference, product, or quotient.

1. $-18+34$	**2.** $14-\lvert 23\rvert$	**3.** $-7+(-12)$
4. $-6\times\lvert -4\rvert$	**5.** $\frac{-36}{3}$	**6.** $-3\cdot\lvert -25\rvert$

7. After a blizzard the amount of snow on the ground melted by 3 inches one day and then another 8 inches the next day. Write an expression that represents the total change in the amount of snow on the ground over the two days.

8. A scuba diver descended at a rate of 8 feet per second for one minute. What was her total change in elevation over that period of time?

9. A gopher dug a burrow 6 feet below ground. He came up 2 feet to find food, then dug back down another 8 feet. How many feet below ground is he?

Topic #2: Fraction Operations

10. $-\frac{11}{12}+\frac{2}{3}$	**11.** $3\frac{1}{2}+4\frac{2}{5}$	**12.** $6\frac{3}{8}-2\frac{5}{6}$
13. $-\frac{5}{3}\times 1\frac{1}{4}$	**14.** $-5\frac{3}{5}\cdot -\frac{1}{7}$	**15.** $\frac{32}{9}\div 4$

16. Scott filled his gas tank up with $19\frac{5}{9}$ gallons of gas. If he uses $1\frac{5}{6}$ gallons of gas each day, after how many days will he need to refill his tank?

17. Mia has $4\frac{1}{5}$ inches of red yard and $2\frac{3}{4}$ inches of blue yarn. How many inches of yarn does she have?

Topic #3: Exponents, Roots and Scientific Notation

Directions: Complete the chart below.

	Expanded Notation	Exponential Expression	Value
18.	$3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$		
19.	$4 \cdot 4 \cdot 4 \cdot 4$		
20.	$(-6) \cdot (-6) \cdot (-6)$		
21.	$\frac{3}{5} \cdot \frac{3}{5} \cdot \frac{3}{5}$		

Topic #4: Fraction, Decimal, and Percent Conversions

Directions: Complete the chart below.

	Fraction	Decimal	Percent
22.	$\frac{11}{50}$		
23.			14%
24.		0.8	
25.	$\frac{24}{20}$		

Directions: Evaluate each expression. Give your answer as a fraction in simplest form.

$\frac{5}{6} \times 0.42$	$-2.8 - \left(-6\frac{5}{8}\right)$	$\left(1.75 - \frac{4}{5}\right) \cdot \frac{2}{3}$

Directions: Evaluate each expression. Give your answer as a decimal.

$-\frac{3}{4} \cdot 0.16$	$0.76 \div \frac{1}{4}$	$-2\frac{1}{2} - 0.78$

Jorge has one dog who weighs $51\frac{1}{5}$ pounds and another dog who weighs 18.3 pounds. How much heavier is the first dog?

Topic #5: Order of Operations

Directions: Simplify.

$5^2 + 80 \div (2^3) \times 5$	$-14 + \frac{(2^3 \times 6)}{4}$	$\frac{(-6)^2 + 32 \div 2^4}{\sqrt{4}}$

Topic #6: Properties

Commutative Property Order doesn't matter when adding or multiplying	**Inverse Property** Use opposites to cancel out the original number
Associative Property Grouping doesn't matter when adding or multiplying	**Property of Zero** A number multiplied by zero is always zero.
Identity Property Keeps the value of the original number.	**Distributive Property** Multiply a value to an expression in parentheses.
Directions: Name the property that justifies each statement.	
$-5(4x+5) = -20x - 25$	$x^2 \cdot (y^2 \cdot z^2) = (y^2 \cdot z^2) \cdot x^2$
$6 + (7 + 9) = (6 + 7) + 9$	$-m^3 + 0 = -m^3$
What is the multiplicative inverse of -45?	What is the additive identity of 16?
What is the additive inverse of 6?	What is the multiplicative identity of $\frac{1}{2}$?

Name: _____ **Math 7 Review:** Packet #2

Topic #1: Expressions

Directions: Evaluate each expression given the variable replacements.

1. $(a^2+b)+4ab$ $(a=4,\ b=-3)$	**2.** $5r^2-2rs^2$ $(r=-5,\ s=6)$	**3.** $(z+6)^3+x$ $(x=-8,\ z=6)$
4. $p(pm+p)$ $(p=2,\ m=\frac{2}{5})$	**5.** $4h^2-\lvert j\rvert$ $(h=3 \text{ and } j=-9)$	**6.** $\lvert -17\rvert-(x+y)^2$ $(x=14,\ y=-20)$

Directions: Simplify each expression.

7. $4(-3x+5)$	**8.** $3m+8-6m+1-m$	**9.** $9v-(5-10v)+8$
10. $-2(x-3)+\frac{3}{2}(-4x+10)$	**11.** $-10+\frac{3}{4}(16r-4)+9r$	**12.** $4(-p+4)-(5p+3)$

Topic #2: Equations

Directions: Solve each equation. Check all solutions.

13. $x+8=-27$	**14.** $n+\frac{7}{15}=-\frac{8}{15}$	**15.** $-\frac{2}{3}b=-\frac{17}{12}$

16. $-5x+8=53$	**17.** $\frac{w-9}{2}=-3$	**18.** $-9=-8+\frac{r}{21}$
19. $6(6-6a)=108$	**20.** $3-7c+3c=-17$	**21.** $214=-3+7(-1+8s)$
22. $-2(1+2d)=28+d$	**23.** $-(1+4m)=3(2-m)+4$	**24.** $7(k+4)=-1+8(k+2)$

Directions: Translate each equation. Do not solve.

25. "a number decreased by fourteen is six"	**26.** "the quotient of a number and negative two is five"
27. "the difference of twice a number and eight is ten"	**28.** "12 more than one-fourth of a number is 3"

Directions: For each problem, define a variable and set up an equation, then solve.

29. Vince has a dog washing business. He washed 8 dogs and earned a total of \$119.92. How much does he charge per dog?	**30.** Mel paid for three-fourths of the cost of a cake and Gretchen paid the rest. If Mel paid \$21, how much did Gretchen pay?

Equation	Solution	Equation	Solution

31. Ella ate half of her gummy bears before adding thirteen more to the bowl. If she now has 25 gummy bears, how many did she start with?

Equation	Solution

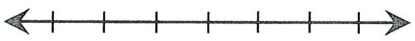
32. Maggie spent $16 at the movies. She purchased one ticket for $5.50 and packs of candy for $1.75 each. How many packs of candy did she buy?

Equation	Solution

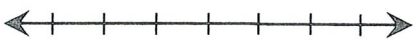
Topic #3: Inequalities

Directions: Translate each inequality. Graph your solution on the number line.

33. "A number is at most six."

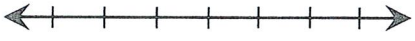


34. "Twenty is no less than a number."



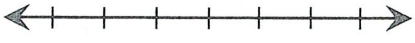
Directions: Solve each inequality. Graph your solution on the number line.

35. $b-6>-8$



36. $3 \le \frac{x}{-6}$

37. $-180 < -12r$



38. $-10+6y \ge 8$

39. Select all values of m that make the inequality below true.

$$-2m+7 \le 35$$

- ☐ -18
- ☐ -16
- ☐ -14
- ☐ -12
- ☐ -10

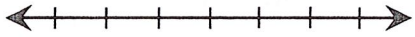
40. Select all values of c that make the inequality below true.

$$\frac{1}{2}c-4<6$$

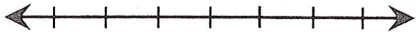
- ☐ 17
- ☐ 18
- ☐ 19
- ☐ 20
- ☐ 21

Directions: Translate each inequality. Graph your solution on the number line.

41. "Eleven times a number is no more than one hundred twenty one."

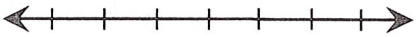


42. "Negative four is at least six less than a number."



43. "The sum of negative two and nine times a number is less than ninety four."

44. "The sum of a number and one, divided by five is greater than or equal to three."



Directions: Define a variable and set up an inequality, then solve.

45. Dana is shopping for clothes. She wants to buy a pair of shorts for $12 and plans to spend the rest on $7.50 tank tops. How many tank tops can she buy if she wants to spend less than $42?

Inequality	Solution

46. Liz makes and sells necklaces. It costs her $40 for the supplies to make 50 necklaces. How much must she sell each one for in order to make a profit of at least $250?

Inequality	Solution

47. Shelly wants to earn at least $500 this week. She made $45 babysitting and earns $12.50 per hour at a grocery store. How many hours does she need to work at the grocery store to meet her goal?

Inequality	Solution

48. Nick charges $55 per hour for surfing lessons plus a $30 registration fee. If Mrs. Smith doesn't want to pay more than $470, what is the maximum number of hours she can take lessons?

Inequality	Solution

Name: _____ **Math 7 Review:** Packet #3

Topic #1: Ratios and Rates

Use for questions 1-3: A zoo has 6 tigers, 8 lions and 16 cheetahs in the big cat exhibit. Find each ratio and give your answer in simplest form.

1. tigers to cheetahs	2. cheetahs to lions	3. lions to the total number of animals in the exhibit

Find each unit rate. Round to the nearest tenth or cent when necessary.

4. Wesley worked for 32 hours last week and earned a total of $409.60. How much does he make per hour?	5. The Morris family drove 368.5 miles in 5.5 hours. Find their average rate of speed.

Topic #2: Proportional Relationships

Solve the following proportions.

6. $\frac{b}{10}=\frac{5}{8}$	7. $\frac{5}{2}=\frac{8}{n}$	8. $\frac{6}{5}=\frac{x}{7}$

9. Travis spent $9.84 on 8 pounds of watermelon. How much would he spend on 15 pounds of watermelon?	10. A bag of grass seed weighs 7 pounds and covers 2,800 square feet. If Mark's backyard is 6,000 square feet, how many pounds of grass seed will he need?

11. Deanna is making cookies. She needs $2\frac{1}{6}$ cups of sugar to make 3 dozen cookies. If she has 8 dozen cookies to make, how many cups of sugar will she need?	12. Anna enlarged a photo to hang over her fireplace. The new photo is 47.2 inches wide. If the original photo was 3.6 inches tall and 5.9 inches wide, what is the height of the new photo?

Topic #3: Scale Drawings and Models

13. The park and the movie theater are 3.4 inches apart on a map. If the map has a scale of 0.25 inch = 5 miles, find the actual distance between the park and movie theater.

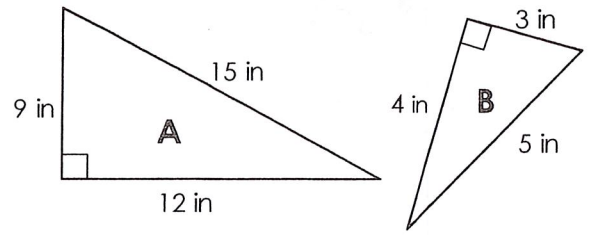
14. A construction company built a scale model of a new building. The model was built using a scale of 3 inches = 32 feet. If the building is expected to be 200 feet tall, how tall is the model?

15. Emma and Ellie are twins and their birth weight can be compared using a scale of 0.75 pounds:0.9 pounds. If Emma weighed 6.4 pounds at birth, how much did Ellie weigh?

16. Ben drew plans for a new garage. On the plans, the garage is 6.4 inches long. If the actual garage will be 18 feet long, what was the scale used to create the drawing?

Topic #4: Similar Figures and Indirect Measurement

Use the similar figures below for questions 17-18.

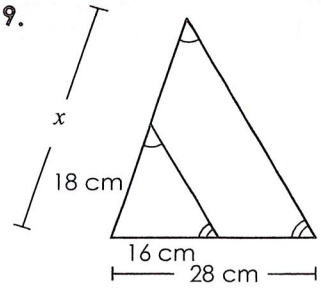


17. Give the scale factor of Figure A to Figure B.

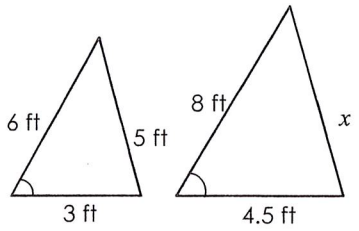
18. Give the scale factor of Figure B to Figure A.

If the figures below are similar, find the value of x.

19.



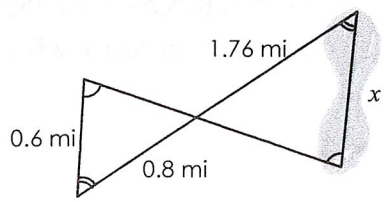
20.



Use the given information to find each measure. Round to the nearest hundredth if necessary.

21. A rosebush is 2 feet tall and casts a shadow that is 7 feet long. The bush is planted next to a tree that is 8.5 feet tall. How long of a shadow is cast by the tree?

22. Find the distance across the lake.



Topic #5: Percents

Round to the nearest hundredth if necessary.

23. Find 4% of 725

24. 14 is what percent of 70?

25. 28 is 35% of what number?

26. Of the total students at Martin Middle School, 224 students are picked up by their parent at dismissal. If this is 28% of the total number of students, how many students are at Martin Middle School altogether?

27. On Monday, Kacie completed 40% of the total miles she wanted to run for the week. If she wanted to run 20 miles during the week, how many miles did she run on Monday?

28. Theater tickets are marked down 15%. How much are the tickets if they originally cost $55?

29. Andrew has a coupon for 30% off his purchase at an electronics store. If he buys a $199 television, how much does he pay?

30. A new robotic toy was selling for $24 before it became very popular. The store raised the price by 25%. What was the cost of the toy after the markup?

31. Manny buys a new grill that costs $375. The grill is discounted 22% and sales tax is 6.5%. How much does Manny pay for the grill?

32. Pam bought a pair of shoes on sale for $22.40. If this was 20% off the original price, find the original price of the shoes.

33. Shelly buys a dining room table that costs $950. The store has discounted the table 30%. She has a 25% off coupon to use after the store discount. How much does Shelly pay for the table?

34. Melanie earns 3.5% commission on each house she sells. If she just sold a $420,000 house, how much did she earn?	**35.** Xavier earns a 15% commission on each washing machine he sells. Last week he sold four $450 machines. How much did he earn?
36. Beth purchased her car for $18,400. Three years later the car was worth $15,200. Find the percent change in the value of her car.	**37.** Darren works at a sporting goods store. Last week he sold 62 pairs of soccer cleats. This week he sold 80 pairs of soccer cleats. What is the percent change in the amount of soccer cleats sold?

Topic #6: Simple Interest

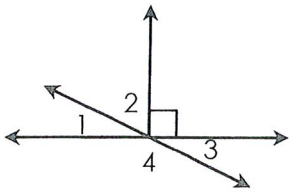
Solve each problem. Round to the nearest tenth or cent when necessary.	
38. Mary put $12,600 in an account with a simple interest rate of 2.2%. Find the amount of interest earned at the end of 10 years.	**39.** Chris borrowed $25,000 from the bank to build a swimming pool at a simple interest rate of 9%. If he took 12 years to pay the loan, how much did he pay in total?
40. Carmen put $500 in an account with a simple interest rate of 1.75%. When she withdrew the money, she had earned $78.75 in interest. How long did she leave the money in the account?	**41.** Robin borrowed $9,500 to furnish a new house. The bank charged her a simple interest rate of 4.5%. By the time she paid the loan in full, she had paid a total of $12,065. How long did it take Robin to pay off her loan?
42. Nathan bought a new computer for $875. He financed it through the computer store for 3 years. He paid a total of $131.50 in interest. What was the simple interest rate on the loan?	**43.** Hank put $850 in an account for his daughter when she was born. When he withdrew the money 18 years later there was a total of $1,370.20 in the account. What was the simple interest rate?

Name: _____ **Math 7 Review:** Packet #5

Topic #1: Angle Relationships

Using the diagram below, classify the angle pair as vertical, adjacent, complementary, supplementary, or congruent angles. Use all names that apply.

1.



a) $\angle 1$ and $\angle 2$

b) $\angle 1$ and $\angle 3$

c) $\angle 3$ and $\angle 4$

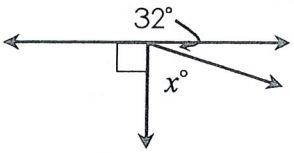
d) $\angle 1$ and $\angle 4$

2. $\angle P$ and $\angle Q$ are supplementary angles. If $m\angle Q = 72°$, find $m\angle P$.

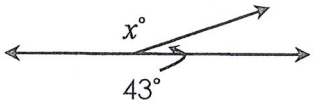
3. $\angle R$ and $\angle S$ are complementary angles. If $m\angle R = 14°$, find $m\angle S$.

Find each measure.

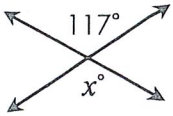
4.



5.

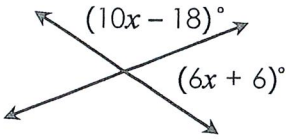


6.

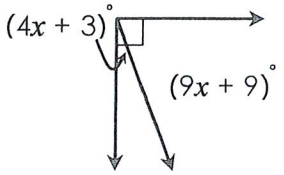


Find the value of x.

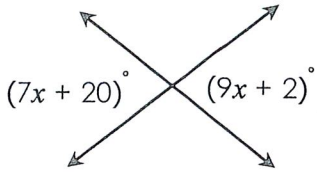
7.



8.

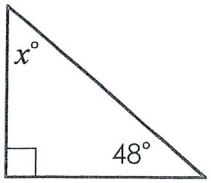


9.

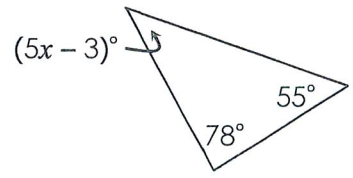


Topic #2: Triangles

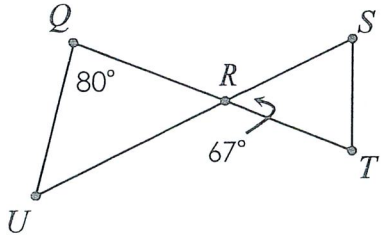
10. Find the value of x.



11. Find the value of x.

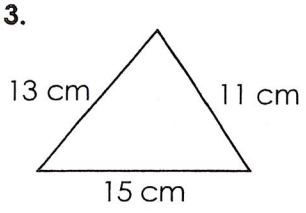


12. Find $m\angle QUR$.

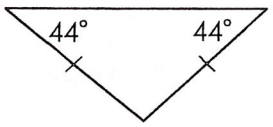


Classify each triangle by its angles and sides.

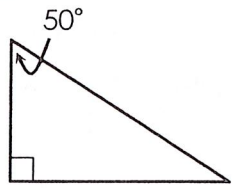
13.



14.



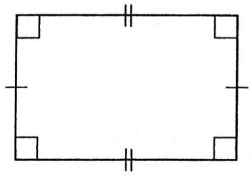
15.



Topic #3: Quadrilaterals and Polygons

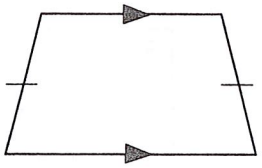
Classify each figure using all names that apply.

19.



- ☐ Quadrilateral
- ☐ Trapezoid
- ☐ Isosceles Trapezoid
- ☐ Parallelogram
- ☐ Rectangle
- ☐ Rhombus
- ☐ Square

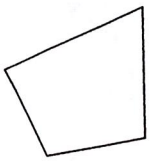
20.



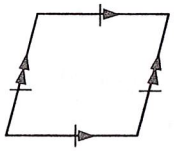
- ☐ Quadrilateral
- ☐ Trapezoid
- ☐ Isosceles Trapezoid
- ☐ Parallelogram
- ☐ Rectangle
- ☐ Rhombus
- ☐ Square

Classify each figure using the name that best describes it.

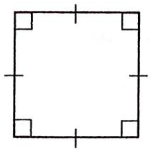
21.



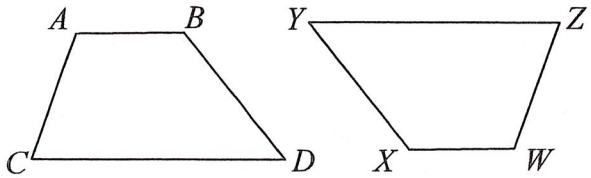
22.



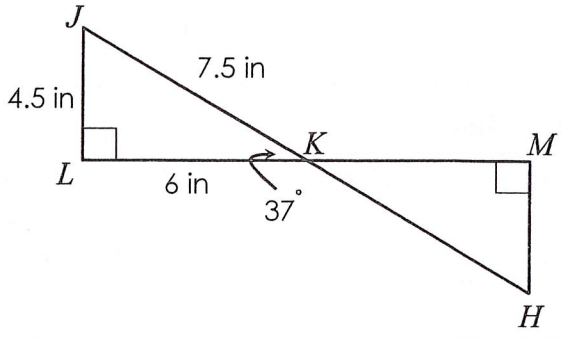
23.



24. If trapezoid $ABCD \cong$ trapezoid $WXYZ$, identify the congruent parts.



25. If $\Delta JKL \cong \Delta HKM$, find each measure.

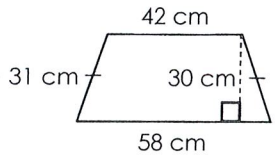


$\angle A \cong$	$\overline{XY} \cong$		
$\angle B \cong$	$\overline{YZ} \cong$	$m\angle H =$	$HM =$
$\angle C \cong$	$\overline{WZ} \cong$	$m\angle M =$	$HK =$
$\angle D \cong$	$\overline{XW} \cong$	$m\angle K =$	$MK =$

Topic #5: Area and Perimeter of Plane Figures

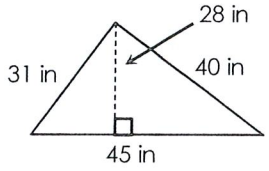
Find the perimeter and area of each figure.

38.



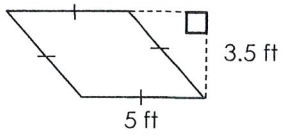
Perimeter	Area

39.



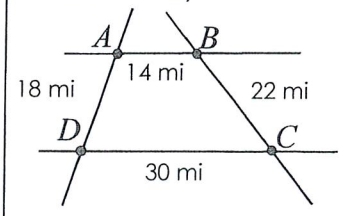
Perimeter	Area

40.

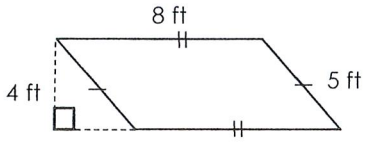


Perimeter	Area

41. Anne is a bus driver and drives the route from points A to B to C to D and back to A again six times a day. How many miles does she drive each day?



42. Chris is covering a window with a decorative adhesive film to filter light. The film costs $2.35 per square foot. How much will the film cost?



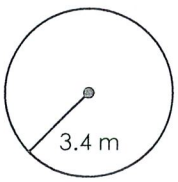
Topic #6: Circumference and Area of Circles

Find the circumference and area of each figure.

43.

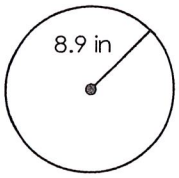
Circumference	Area

44.



Circumference	Area

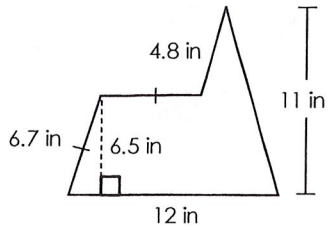
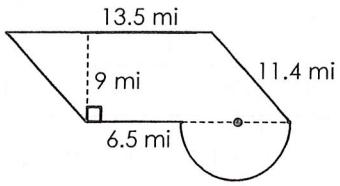
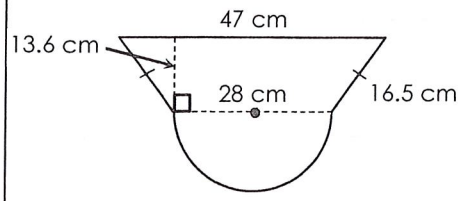
45. A blacksmith is bending metal rods to create handmade basketball hoops. How long of a metal rod is needed to make the hoop below?



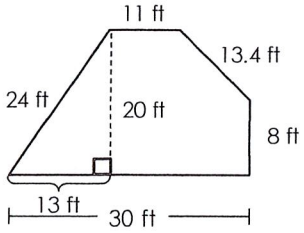
46. Patty had a new sprinkler system installed with sprinklers that spray water 5.5 feet in each direction as they rotate in a circular motion. If she has 6 sprinklers in her backyard, how much grass will be watered if no sprinkler zones overlap?

Topic #7: Perimeter and Area of Composite Figures

Find the perimeter and area of each composite figure. Use 3.14 for pi when necessary.

Figure	Perimeter	Area
47. 		
48. 		
49. 		

50. Rebecca is installing new flooring in the first level of her house. If the flooring costs $0.85 per square foot, how much will it cost?

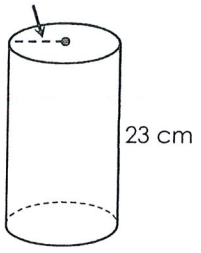


Topic #8: Surface Area and Volume of Prisms and Cylinders

complete 3 out of 5. 2 problems from 51-53. 1 problem from 54-55.

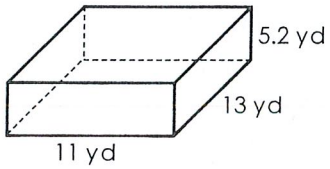
Find the surface area of each figure. Use 3.14 for pi when necessary.

51.



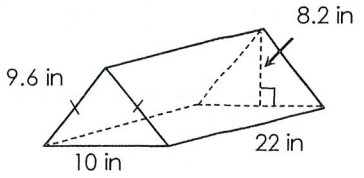
Surface Area:

52.



Surface Area:

53.



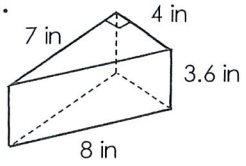
Surface Area:

54. A cupcake company designed cylindrical boxes for their new cake pops. How much material is needed to make three boxes if each is 5 inches tall and has a radius of 0.75 inches?

55. A fish tank is in the shape of a rectangular prism. The tank is 18 inches wide, 12 inches deep and 23 inches tall. How many square inches of glass was used to make the tank if there is no top?

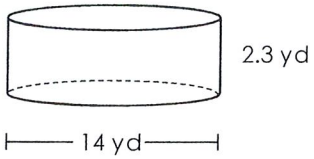
Find the volume of each figure. Use 3.14 for pi when necessary. complete 3 out of 5. 2 problems from 56-58. 1 problem from 59-60

56.



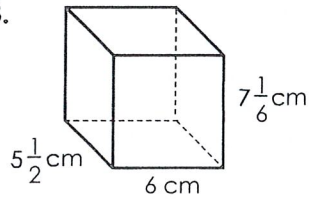
Volume:

57.



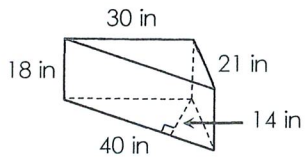
Volume:

58.



Volume:

59. Manuel just bought a corner aquarium. He purifies the water by using 3 drops of a conditioning product for every 48 cubic inches of water. How many drops will he need?



60. The Avery family just had an above ground pool installed. The pool is 6 feet deep and has a diameter of 22 feet. If the cost to fill the pool is $6.25 per 100 cubic feet, find the total spent to fill it to the top.

Name: _____ **Math 7 Review:** Packet #6

Topic #1: Theoretical and Experimental Probability

1. A number from 0-9 is chosen at random 80 times. The results are shown in the table.

Result	0	1	2	3	4	5	6	7	8	9
Frequency	6	9	8	10	7	8	9	7	11	5

a) What is the theoretical probability of choosing the number 3?

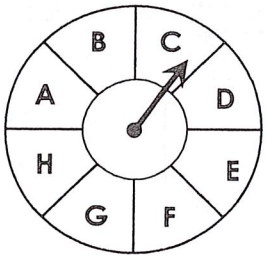
b) Based on the experiment, what is the probability of choosing the number 3? Compare this to the previous answer.

2. Theoretically, if a number is chosen 500 times, how many times would you expect a number greater than 5?

3. Based on this experiment, if a number is chosen 500 times, how many times would you expect a number greater than 5? Compare this to the previous answer.

Topic #2: Tree Diagrams & The Counting Principal

4. The spinner below is spun once and a coin is flipped. Draw a tree diagram to show all possible outcomes.



5. List the sample space:

6. What are the total number of outcomes?

Use the fundamental counting principle for questions 7-8.

7. A letter from the word **PERSONALITY** and a card from a standard deck are chosen at random. How many outcomes are possible?

8. Mark is getting a smoothie. He can choose from three sizes, nine fruit flavors and three different juices. How many smoothie outcomes are possible?

Topic #3: Compound Probability

9. A letter from the word **PENNSYLVANIA** is chosen at random, then a standard die is rolled. Find each probability.

a) P(L, then odd)	**b)** P(N, then less than 4)	**a)** P(a vowel, then at least 3)

10. There are 8 red, 12 blue, 10 yellow, and 6 green marbles in a bag. A marble is chosen at random, replaced, then another is chosen. Find each probability.

a) P(red, then green)	**b)** P(not red, then blue)	**c)** P(both yellow)

Topic #4: Using Samples to Predict

11. A health center in a small town wants to survey people about their exercise habits. Determine whether the samples below would be biased or unbiased. Explain.

a) 75 random people at the gym	**b)** calling every 20th person listed in the town directory	**c)** 200 people seated in a movie theater

12. A school surveyed a random group of students to determine their favorite school lunch. Results are shown below.

Result	Frequency
Pizza	15
Burgers	25
Hot dogs	12
Sandwiches	20
Salad	8

a) What percent of the students reported pizza as their favorite?

b) What percent of the students reported burgers or sandwiches as their favorite?

c) Out of 200 students, how many would you expect to say their favorite lunch is salad?

13. A museum surveyed a random group of attendees to determine their favorite exhibit. Results are shown below.

Result	Frequency
Sea Life	10
Ice Age	20
Dinosaurs	22
Reptiles	18

a) What percent of the attendees reported the dinosaurs exhibit as their favorite?

b) What percent of the attendees reported anything other than sea life as their favorite?

c) Out of 500 attendees, how many would you expect to say the reptile exhibit is their favorite?

Topic #5: Measures of Central Tendency

Find the mean, median, mode(s), and range for each of the following data sets. Round to the nearest tenth if necessary.

14. The ages of children in a summer art program are listed below.
{8, 7, 8, 12, 13, 9, 10, 11, 12, 7, 8, 10, 12, 9, 9, 11}

Mean	Median	Mode(s)	Range

15. The table shows the number of each type of pizza sold at Pat's Pizzeria yesterday.

Type	Number Sold
Pepperoni	74
Cheese	130
Sausage	80
Veggie	34
Hawaiian	12
Meat Lovers	60
White	10

Mean	Median	Mode(s)	Range

Topic #6: Stem-and-Leaf Plots

16. The stem-and-leaf plot shows the age, in years, of passengers on an airplane.

Passenger Ages

Stem	Leaf
0	1 2 4 5
1	6 8 9
2	0 2 3 7
3	3 5 8 8
4	0 2 4
5	

Key: 0 \| 1 = 1 year old

a) Find the mean, median, mode and range.

Mean: _____

Median: _____

Mode(s): _____

Range: _____

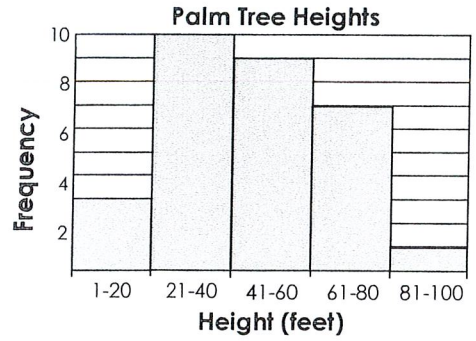
b) How many passengers were over the age of 25?

c) How many passengers were no more than 30 years old?

d) How many passengers were between the ages of 20 and 40?

Topic #7: Histograms

17. The histogram below shows the heights of 30 palm trees measured on an island resort. Use the histogram to answer the questions.



a) How many trees are between 41 and 60 feet tall?

b) How many trees are at least 21 feet tall?

c) What percent of the trees are greater than 60 feet tall?

Topic #8: Box-and-Whisker Plots

Find the five-number summary and construct the box-and-whisker plot for each data set.

18. The height (in inches) of 15 children on a soccer team:
{48, 45, 50, 55, 62, 60, 49, 51, 58, 59, 60, 54, 49, 60, 50}

Minimum: _____

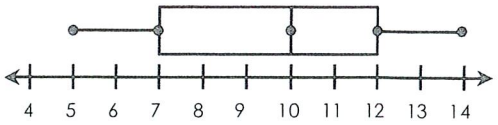
Lower Quartile: _____

Median: _____

Upper Quartile: _____

Maximum: _____

19. The number of dozens of cupcakes sold at Sweetie's Bakery each day over a month is shown on the box-and-whisker plot to the right.



Dozens of Cupcakes Sold

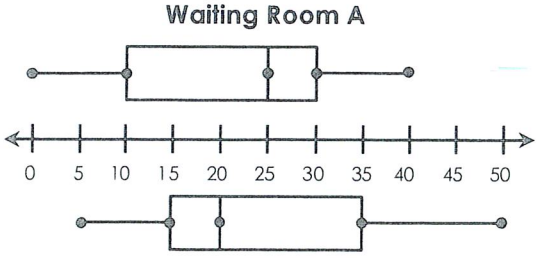
a) What is the interquartile range? _____

b) What percent of the days did they sell more than 7 dozen cupcakes? _____

c) What percent of the days did they sell between 10 and 14 dozen cupcakes? _____

d) What percent of days did they sell no more than 7 dozen cupcakes? _____

20. The waiting time at the emergency room of two different hospitals are shown below.



a) Which waiting room had a greater range in wait times?

b) What is the difference in the minimum wait time?

c) What is the difference in the median wait time?

d) Which group had the longest wait time overall? Explain.