

Name: _____ Class: _____

7th Grade Final Exam Review

My math Final Exam is on: _____

CHAPTER 1 – Algebraic Reasoning

1. What is the value of 4^2 ? _____ 2. What is the value of 4^3 ? _____

Solve.

3. $9 \div 3 \cdot 3 + 7 - 5$ 4. $53 - (4+7)(20-19)$
5. $64 \div 4^2 + (4^2 - 13)$ 6. $24(8 - 24 \div 4) + 3 \cdot 9$

7. Steve bought a new pen for \$3.25 and 6 notebooks that were all the same price, p . The total was \$21.30, not including tax. Which equation could be used to find the price of each notebook?

- A. $3.25p + 6 = 21.30$ B. $3.25 + 6p = 21.30$
C. $6p = 21.30$ D. $3.25 + 21.30 = 6p$

Solve and check.

8. $3 + x = 21$

9. $\frac{a}{3} = -6$

10. $-2y = -16$

11. $\frac{t}{-2} = 12$

12. The answer to a _____ problem is called the quotient.

13. The answer to an addition problem is called the _____.

14. The answer to a _____ problem is called the product.

15. The answer to a subtraction problem is called the _____.

Write each phrase as an algebraic expression.

16. 2 less than a number _____

17. 3 times the sum of a number and 5 _____

CHAPTER 2 – Integers and Rational Numbers

Solve.

18. $-13 + 25 =$ _____ 19. $-3 \cdot -15 =$ _____ 20. $-50(2) =$ _____

21. $-12 - (-7) =$ _____ 22. $15 - (-8) =$ _____ 23. $\frac{-75}{-3} =$ _____

24. Order from greatest to least: 7, -6, 5, -8, -3 _____

25. Find the GCF and LCM of 16 and 28.

GCF = _____

LCM = _____

Compare. Write $<$, $>$, or $=$.

26. $\frac{11}{5}$ _____ $1\frac{2}{3}$ 27. 1.5 _____ $1\frac{6}{20}$ 28. -0.65 _____ -0.76

CHAPTER 3 – Decimals and Fractions

29. Mr. Jackson's students bought 10 small drinks for \$0.50 and 14 large drinks for \$0.75. How much money did they spend?

Add or subtract.

30. $3.086 + 6.51$

31. $3.1 - 2.076$

32. $14.75 - 6.926$

Multiply or divide.

33. $3.25(6.2)$

34. $3.57 \div 0.7$

35. $3.2 \div 16$

Solve. Express your answer in lowest terms.

36. $1\frac{5}{12} + 3\frac{3}{4}$

37. $\frac{7}{10} - \frac{1}{2}$

38. $6\frac{1}{3} - 2\frac{5}{6}$

39. $\frac{3}{8} \div \frac{1}{4}$

40. $3\frac{1}{2} \cdot 2\frac{4}{5}$

41. Juan spent $2\frac{1}{2}$ hr doing Math homework and 1.25 hr doing English homework. How much time did he spend doing homework all together?

42. Jill used $4\frac{1}{8}$ cups of green peppers and $2\frac{3}{4}$ cups of red peppers in a recipe. How many cups of peppers did she use in all?

43. In #47, how many more cups of green peppers than red peppers did she use?

44. In #47, if Jill decided to double the recipe, how many cups of red and green peppers (together) will she need?

45. The student council raised \$2200 to help buy some new equipment for the school. They spent $\frac{5}{8}$ of the money on computer equipment. How much money did they spend on computer equipment?

Complete the chart.

Fraction	Decimal	Percent
$\frac{1}{3}$	46.	47.
48.	.6	49.
$\frac{21}{25}$	50.	51.
52.	53.	100%
54.	.75	55.

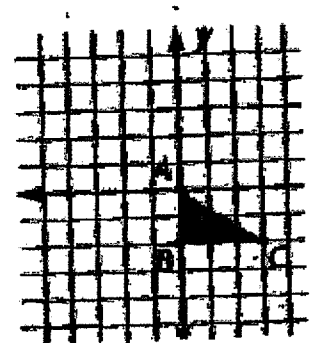
CHAPTER 4 – Patterns and Functions

56. Write a rule to describe this sequence: _____

n	1	2	3	4	5
p	2	5	8	11	14

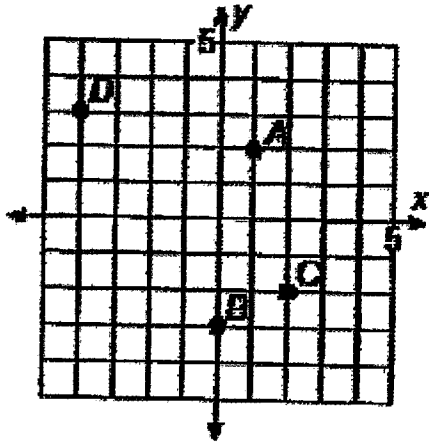
57. In #60, what is the 10th term in the sequence? _____

58. If $\triangle ABC$ is translated 3 units to the left and 5 units up, what will the new coordinates be for vertex B? _____



59. Add vertex D so that $\triangle ABC$ becomes rectangle ABCD. What will the coordinates be for vertex D? _____

60. What are the coordinates of points A, B, C, and D shown in the graph?



A A(0,2), B(-1, -2), C (-2, 0), D(2, 4)

B A(0,4), B(-1, -3), C (-2, -4), D(2, 3)

C A(1,2), B(0, -3), C (2, -2), D(-4, 3)

D A(-1,3), B(1, -3), C (-2, 2), D(1, -3)

CHAPTER 5 – Proportional Relationships

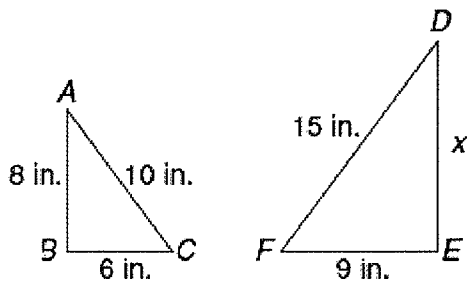
61. Taylor earns \$100 in 8 hours. What is his pay in dollars per hour?

62. Tessa bought an mp3 player for \$185.76. She can make 12 equal payments for 1 year. How much will she pay each month?

63. Jacob worked 16 hours last week at his job. He earns \$6.25 per hour. How much money did Jacob earn last week?

64. A store sells a 5 lb bag of dog food for \$5.25 and a 10 lb bag of dog food for \$9.75. Which size bag has the lowest price per pound?

65. Find the missing side length for these similar figures.



66. On a map of Texas, the distance between Houston and Austin is 3.5 cm. What is the actual distance between the cities if 2 cm = 40 miles?

CHAPTER 6 - Percents

Solve.

67. 12% of 75 = _____

68. What percent of 85 is 34? _____

69. The price for a pair of running shoes is \$68.00. Today, the shoes are marked 20% off. What is the new price of the shoes?

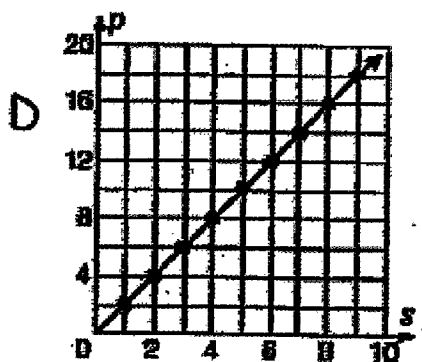
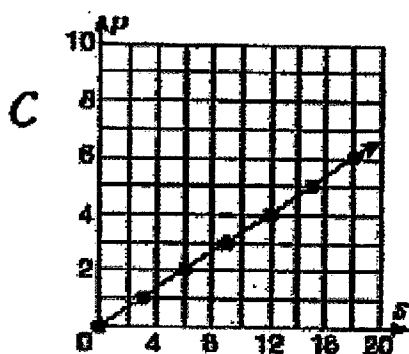
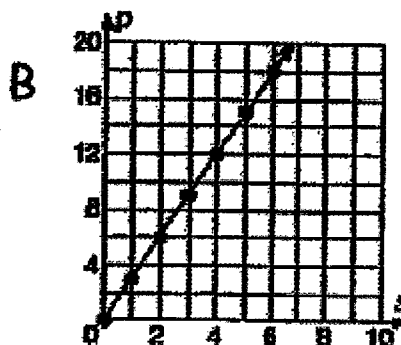
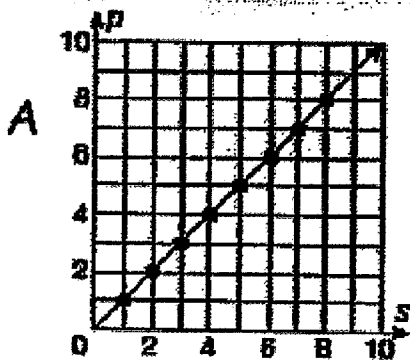
70. Derek borrowed \$80 from his uncle. He paid back 40% of what he borrowed. How much did he pay back?

71. Morgan spent $\frac{2}{5}$ of her allowance on a birthday present for her sister. What percent of her allowance did Morgan spend?

72. Find the percent of change: 60 is decreased to 15.

CHAPTER 7 – Collecting, Displaying, and Analyzing Data

73. If the side of an equilateral triangle has length s and the perimeter is p , which graph shows the relationship between s and p ?



74. Find the mean, median, mode, and range.

5, 8, 5, 9, 3

Mean: _____

Mode: _____

Median: _____

Range: _____

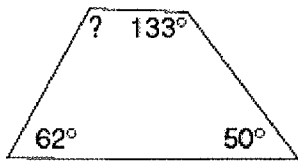
CHAPTER 8 – Geometric Figures

75. What is the complementary angle to 48° ? _____

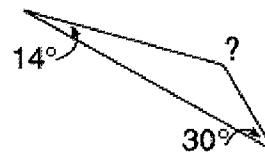
76. What is the supplementary angle to 136° ? _____

Find the measure of the missing angle.

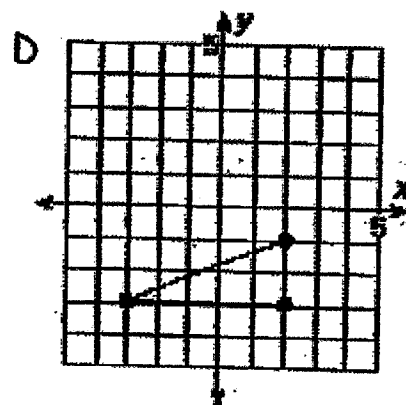
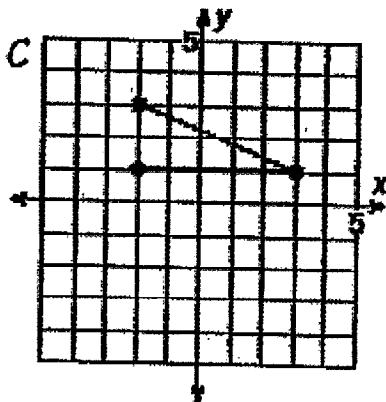
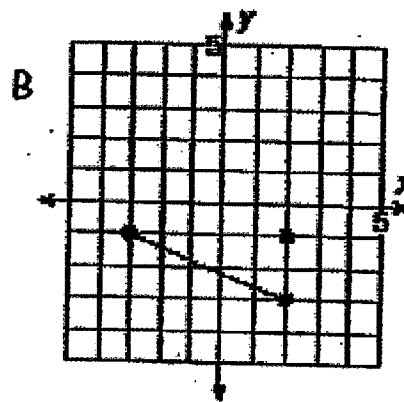
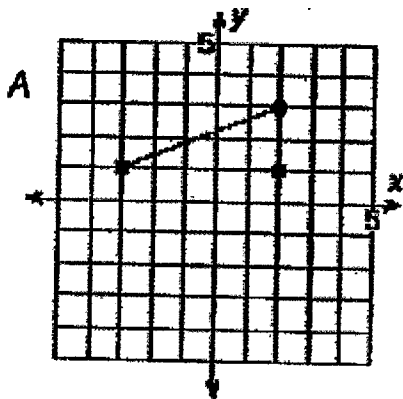
77.



78.



79. $\triangle PQR$ has coordinates $(-3, 1)$, $(2, 3)$, and $(2, 1)$. Which shows the graph of the **reflection** of this triangle around the x-axis?



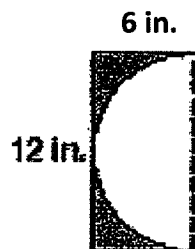
CHAPTER 9 – 2-D Figures

80. $\sqrt{144} =$ _____

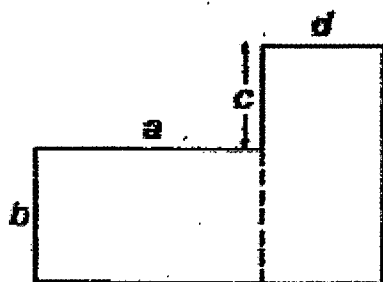
81. $\sqrt{64} =$ _____

82. What is the perfect square that follows 64? _____

83. A sheet metal worker needs to cut a semicircular piece of metal from a rectangular plate. Refer to the shaded area in the diagram below. How many square inches of metal are left after the worker has cut out the semicircle? *Use 3 for pi.*



84. Which formula could you use to find the area of the figure below?



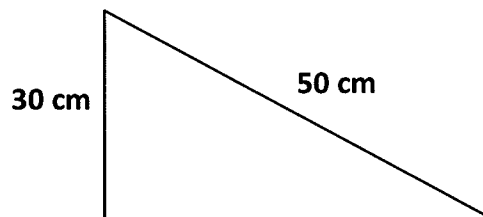
A $A = ab + cd$

B $A = ab + (b + c)d$

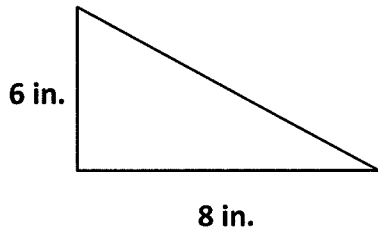
C $A = ab - cd$

D $A = a + b + + d$

85. Find the area.

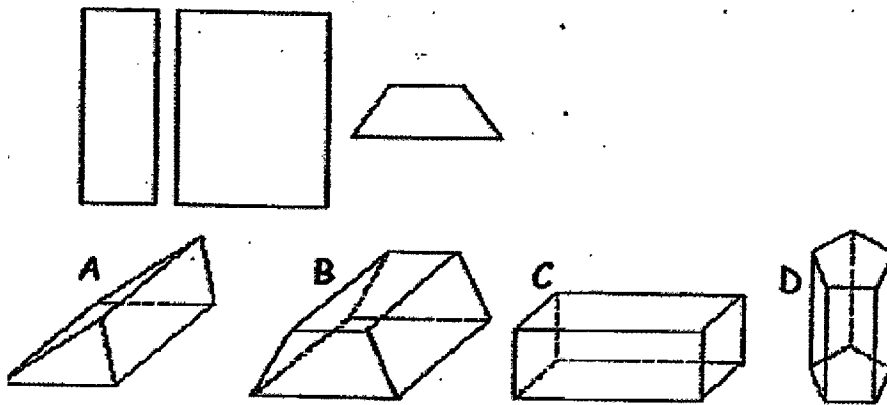


86. Find the missing side.

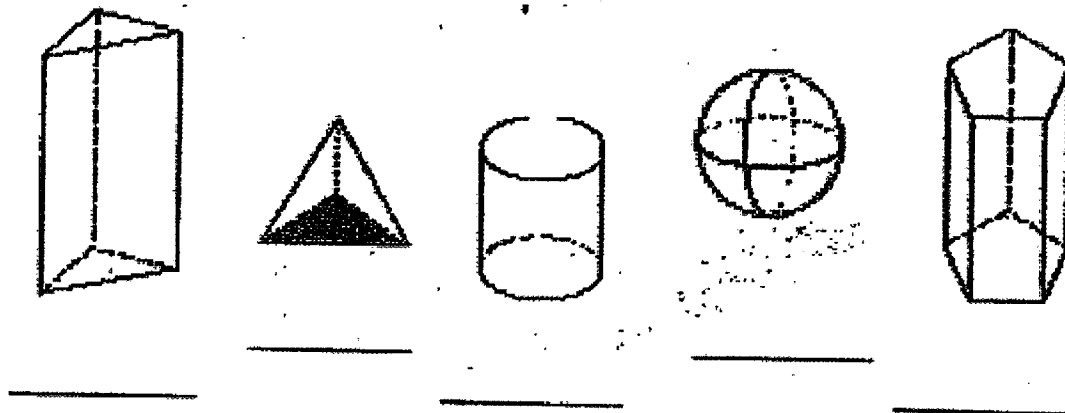


CHAPTER 10 – 3-D Figures

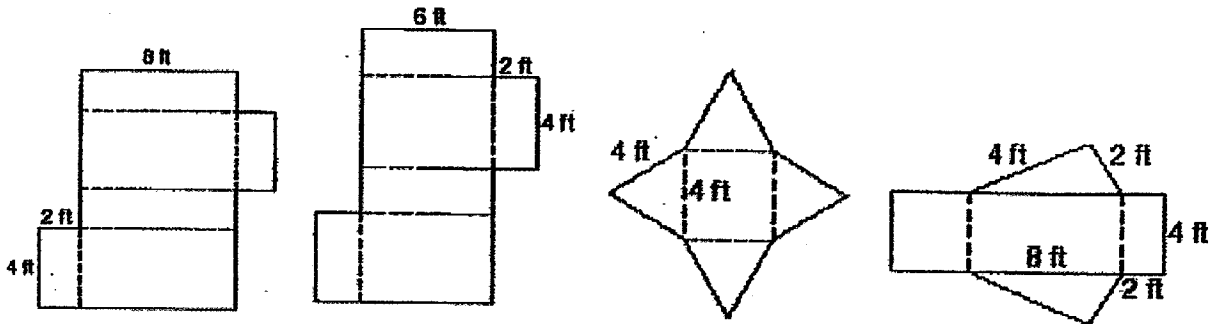
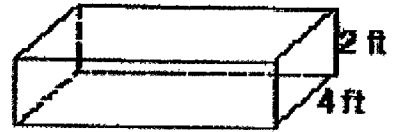
87. The top, side, and front views of a solid are shown. Which could be a sketch of the solid?



88. Correctly name each 3-D shape.



89. Which of the following nets matches the prism?

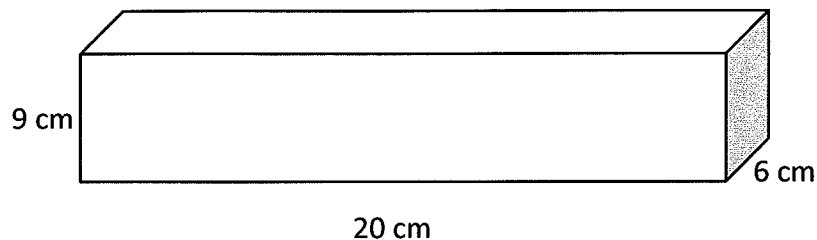


90. Find the volume of a cylinder with a diameter of 20 meters and a height of 4 meters.

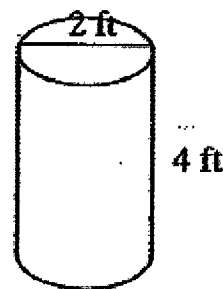
91. How much water can a 2 foot tall aquarium that is a rectangular prism hold if the length is 2.5 feet and the width is 4 feet?

92. A triangular prism has base with an area of 14 feet. If the height is 11 feet, what is the volume?

93. How much wrapping paper do you need to cover this box?



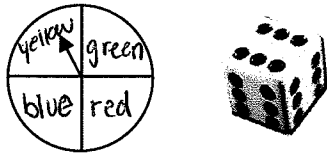
94. Erica is painting a pole. How many square feet of paint is needed if she wants to paint all surfaces, including the top and bottom?



CHAPTER 11 – Probability

95. Rachel rolls a number cube. What is the probability she will roll a prime number? Write your answer as a fraction.

96. Find the probability of spinning red and rolling an even number.



97. Each letter of the word *probability* is written on a card and put in a bag. What is the probability of picking a vowel on the first try and another vowel on the second try if the first card is replaced?

98. There are 9 girls and 12 boys on the student council. What is the probability that a girl will be chosen as president? Write your answer as a fraction.

99. At the ice cream shop, customers can choose between 4 flavors (vanilla, chocolate, strawberry, and pecan) and 3 toppings (hot fudge, caramel, gummy bears). Make a sample space of all possible outcomes.

How many possible outcomes are there? _____

CHAPTER 12 – Two-Step Equations

Solve and check each equation.

100. $-8 + 10x = -18$

101. $-2x - 7 = 21$

102. $6x + 13 = -1$

103. $3m - 9 = -3$