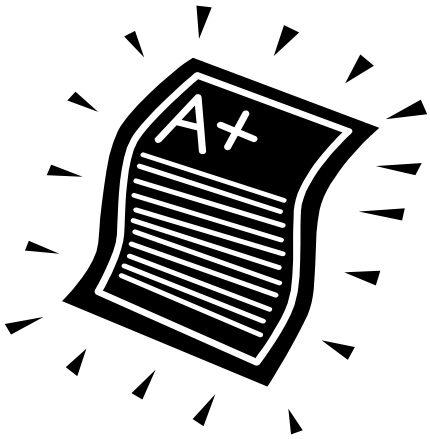
7th Grade Mathematics Assessment

Name: _____
Date: _____
School: _____
District: _____

Achieve
Forecast Student Test Results



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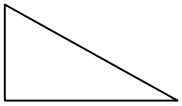
Post Test

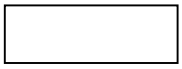
2,000 Series

Mathematics Reference Sheet

Area



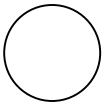
Triangle $A = \frac{1}{2} bh$



Rectangle $A = lw$

Trapezoid $A = \frac{1}{2} h\,(b_1 + b_2)$

Parallelogram $A = bh$



Circle $A = \pi r^2$

Key

b = base
h = height
l = length
w = width
$S.A.$ = surface area
d = diameter
r = radius
A = area
C = circumference
V = volume

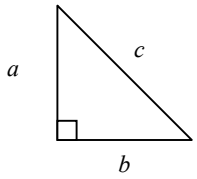
Use 3.14 or $\frac{22}{7}$ for π.

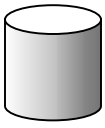
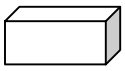
In a polygon, the sum of the measures of the interior angles is equal to $180(n - 2)$, where n represents the number of sides.

Circumference

$C = \pi d = 2\pi r$

Pythagorean Theorem $c^2 = a^2 + b^2$



		Volume	Total Surface Area
	Right Circular Cylinder	$V = \pi r^2 h$	$S.A. = 2\pi rh + 2\pi r^2$
	Rectangular Solid	$V = lwh$	$S.A. = 2(lw) + 2(hw) + 2(lh)$

Conversions

1 yard = 3 feet = 36 inches
1 mile = 1,760 yards = 5,280 feet
1 acre = 43,560 square feet
1 hour = 60 minutes
1 minute = 60 seconds

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

1 liter = 1000 milliliters = 1000 cubic centimeters
1 meter = 100 centimeters = 1000 millimeters
1 kilometer = 1000 meters
1 gram = 1000 milligrams
1 kilogram = 1000 grams

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

Begin with Question #45 on Your Answer Sheet for the Math Portion of the Assessment.

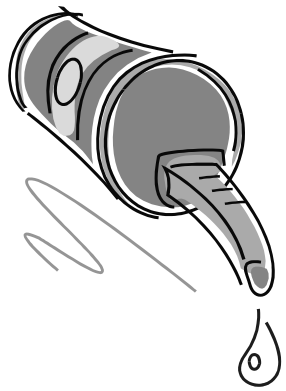
45. Which best describes the numbers below?

12, 16, 4, 8, 20

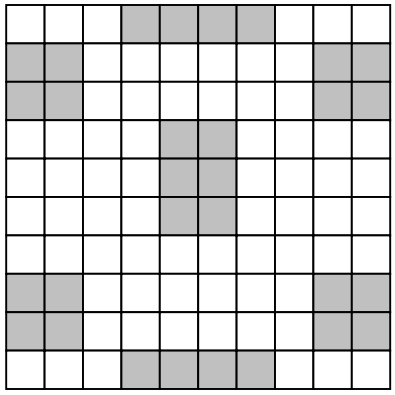
A. odd numbers
B. factors of 20
C. multiples of 4
D. all the numbers divisible by 8

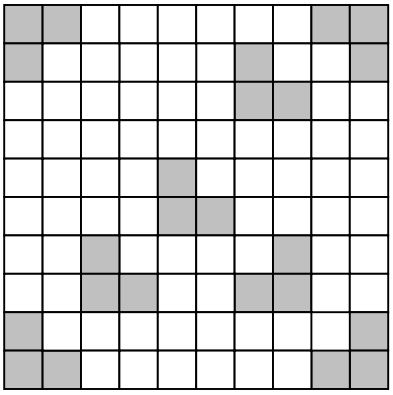
46. Franklin is putting oil in nine motors. Each motor needs $\frac{7}{8}$ gallons of oil. Franklin wants to have enough oil for all nine motors without having an excess of left-over oil. How many gallons of oil should Franklin buy?

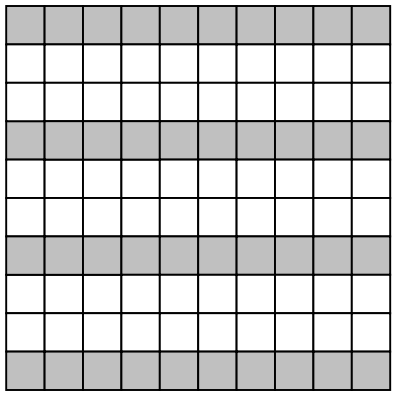
A. 8 gallons
B. 10 gallons
C. 9 gallons
D. 7 gallons

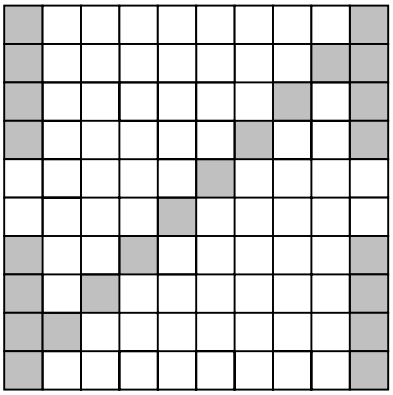


47. Which figure is 30% shaded?

A. 

B. 

C. 

D. 

48. What is the value of the following expression?

$$\mathbf{12^2 + 9^3 =}$$

A. 225
B. 108
C. 873
D. 729

49. What is the scientific notation for **790,000,000**?

A. 7.9×10^6
B. 7.9×10^8
C. 7.9×10^{10}
D. 79×10^7

50. Which of the following is true?

A. $\frac{5}{8} < \frac{1}{2}$

B. $\frac{23}{24} < \frac{3}{4}$

C. $\frac{9}{10} < \frac{8}{9}$

D. $\frac{7}{16} < \frac{1}{2}$

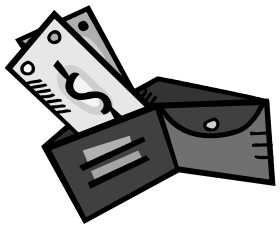
51. Which number represents the thousandths? **7,140.86352**

A. 7
B. 3
C. 6
D. 5

52. Which number shows $9\frac{7}{12}$ written as a decimal?

A. 9.583
B. 9.7
C. 9.19
D. 9.115

53. At $7.00 per liter, how much should Latisha pay for 50 ml?

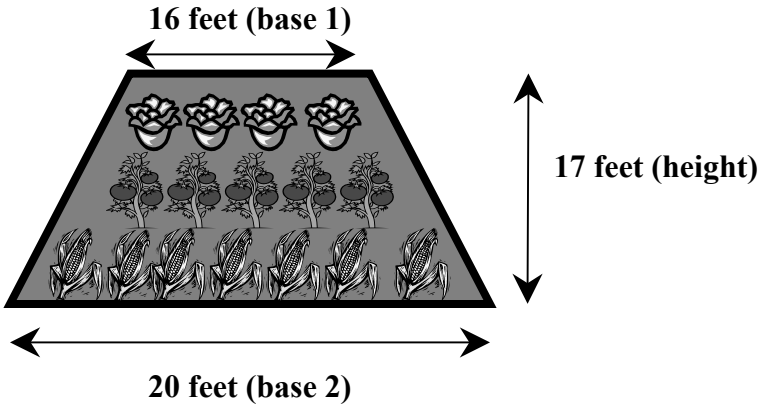


A. $0.35
B. $1.00
C. $1.40
D. $5.00

54. On a map, 4 inches represents 80 miles. How much does 1 inch represent on the map?

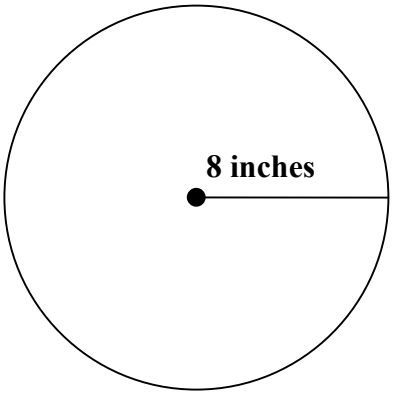
A. 4 miles
B. 1 mile
C. 20 miles
D. 80 miles

Donald's Garden



55. Look at the diagram above. Because of the shape of Donald's backyard, he had to plant his garden in the shape of a trapezoid. What is the area of Donald's garden?
    A. 306 ft
    B. 340 ft^2
    C. 70 ft
    D. 306 ft^2

56. What is the circumference of the circle below?
    A. 25.12 in
    B. 12.56 in
    C. 31.4 in
    D. 50.24 in



57. Solve: $\mathbf{(7 + 2)^3 \cdot 5 - 4 =}$

A. 729
B. 3,641
C. 71
D. 43

58. I'm thinking of a number. If I multiply it by 6 and add 23, the result is 65. What is the number?

A. 7
B. 10
C. 12
D. 14

59. Simplify: $\mathbf{\frac{7}{8} - \frac{1}{6} \cdot \frac{3}{8} + \frac{1}{4} =}$

A. $1\frac{1}{16}$ B. $\frac{33}{64}$ C. $1\frac{1}{8}$ D. $1\frac{3}{16}$

Player	*Points*
Gina	**5**
Casey	**11**
Chelsie	**10**
Amber	**6**
Megan	**2**
Courtney	**8**

60. Look at the chart above. How many players scored more than the average points?

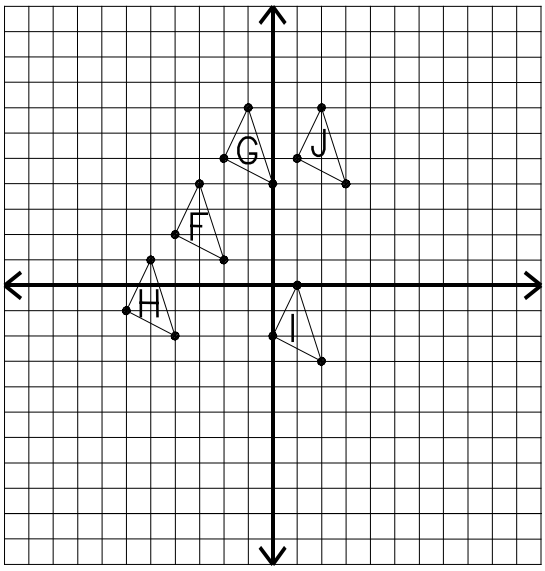
A. 4
B. 3
C. 5
D. 2

61. Find the missing number: **2, –6, ? , –54, . . .**

A. 18
B. –18
C. 36
D. –36

62. Which shows **Figure F** translated 2 units right and 3 units up?

A. Figure G
B. Figure H
C. Figure I
D. Figure J



63. Simplify: **$10 \cdot 2 \cdot p \cdot p \cdot p \cdot t \cdot t \cdot t$**

A. 180 pt
B. $12p^3t^3$
C. $20 + 3p + 3t$
D. $20p^3t^3$

64. Monica is saving money to buy a dress for the winter dance. She has \$28. After receiving her earnings (n) for baby-sitting, she will have a total of \$48. Which equation models this situation?

A. \$28 + \$48 = \$n
B. \$28 – \$n = \$48
C. \$28 + \$n = \$48
D. \$48 + \$n = \$28

65. Savannah is buying lunch in the cafeteria. The menu today includes 5 entrees, 4 side dishes, and 4 desserts. How many different meals can be created if Savannah chooses 1 entrée, 1 side dish, and 1 dessert?
    A. 30
    B. 80
    C. 7
    D. 13

Bradley is buying dog food for his puppy. He has the following brands from which to choose:

Brand	***Size***	***Price***
Big Chow	8 lbs	$14.32
Mighty Bones	10 lbs	$16.90
Healthy Puppy	5 lbs	$9.45

66. Look at the chart above. Which statement is true?
    A. Big Chow and Healthy Puppy cost the same per pound.
    B. Mighty Bones is the least expensive per pound.
    C. Healthy Puppy costs less per pound than Mighty Bones.
    D. Big Chow is the most expensive per pound.

Tina's Sweet Creations is adding a new cookie to the bakery menu. They have surveyed several customers to find popular cookie flavors. The results of the survey are reflected below:

Favorite Cookie	***No. of Customers***
Chocolate Chip Chunk	150
Peanut Butter Pieces	75
Oatmeal Raisin	137
Sugar	28
Gingerbread	17

67. What is the sample size of the survey?
    A. 150
    B. 133
    C. 407
    D. 81.4

68. There are 48 dogs in the pet show. $\frac{5}{6}$ of the dogs have at least one white spot on their body. How many dogs have NO white spots at all?

A. 40
B. 48
C. 10
D. 8

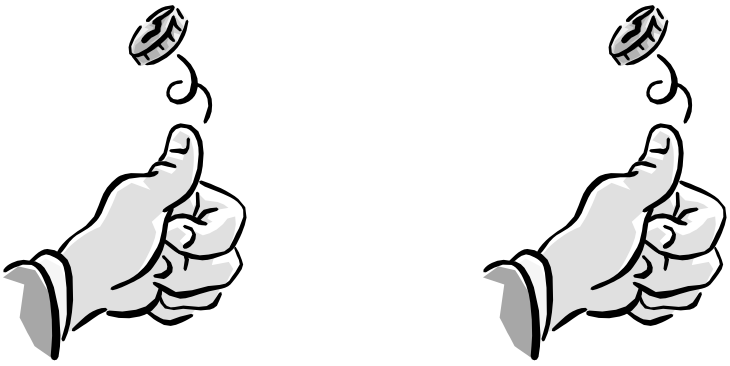
69. Justin and Joshua are each tossing a quarter in the air. What is the probability of both quarters landing on tails?

A. $\frac{1}{4}$

B. $\frac{1}{2}$

C. $\frac{1}{3}$

D. $\frac{1}{5}$



70. A jar has 10 balls. There are 4 green balls, 3 black balls, 2 white balls, and 1 blue ball. What is the probability of drawing a red ball?

A. $\frac{1}{10}$

B. 0

C. $\frac{10}{10}$

D. $\frac{1}{3}$

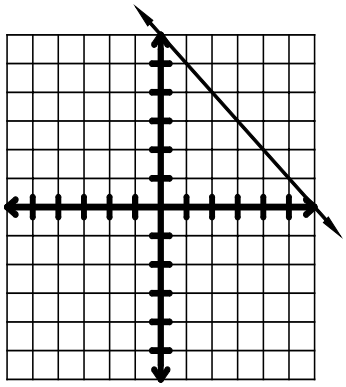
71. Which list is the correct order of operations to simplify the following expression?

21 ÷ 3 (9 – 1) + 7 =

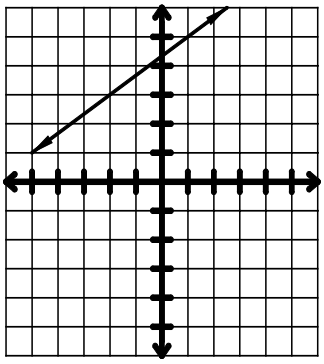
A. subtract, multiple, divide, add
B. divide, subtract, multiple, add
C. subtract, divide, multiple, add
D. subtract, add, multiple, divide

72. Which graph represents the line containing the points (1, 5) and (-2, -1)?

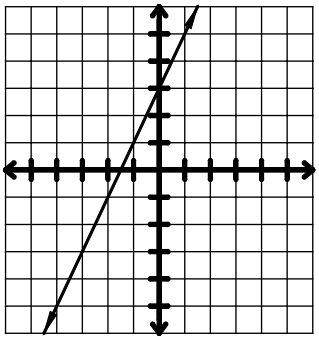
A.



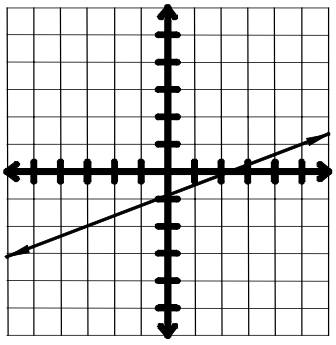
B.



C.



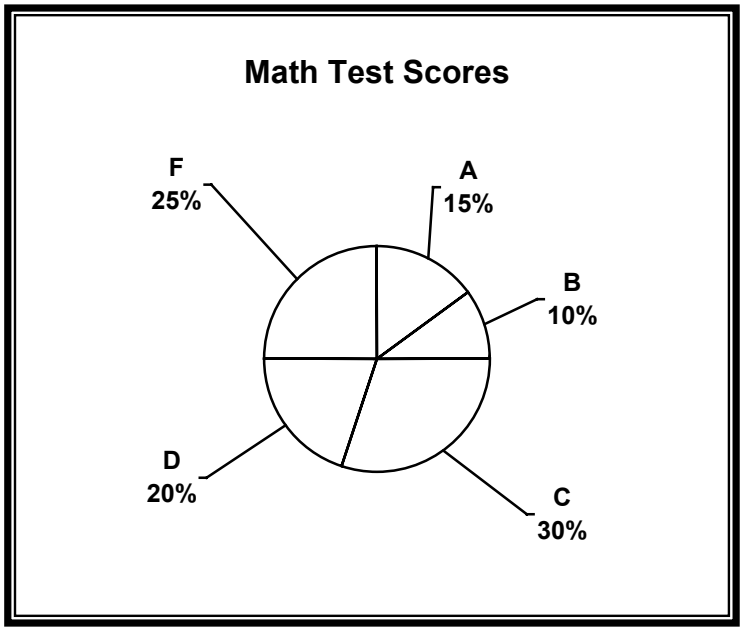
D.



73. Which would be an example of the Associative Property of Addition?

A. 6 + 0 = 6
B. 9 + 7 = 16 or 7 + 9 = 16
C. 9 x 0 = 0
D. (5 + 3) + 2 = 5 + (3 + 2)

Eighty of Dr. Jones' students took a math test on Tuesday. The pie chart below reflects the test scores.

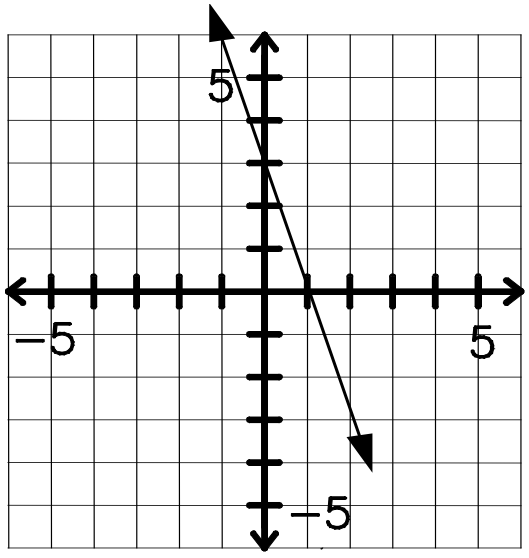


74. How many of Dr. Jones' students passed the math test?

A. 80
B. 75
C. 25
D. 60

75. What is the slope of the line graphed below?

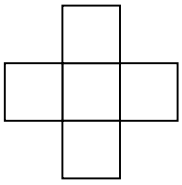
A. –3 B. 3 C. $-\frac{1}{3}$ D. $\frac{1}{3}$

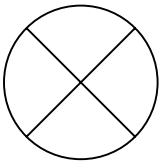


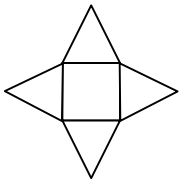
76. Look at the graph above. The line has a(n):

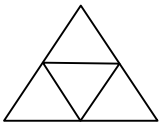
A. undefined slope
B. zero slope
C. negative slope
D. positive slope

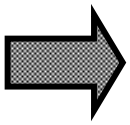
77. Which would be a net for a **square** pyramid?

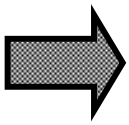
A. 

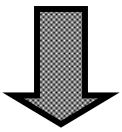
B. 

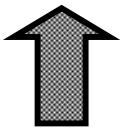
C. 

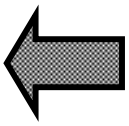
D. 

78. In what position will the  be if it is rotated 270° counterclockwise?

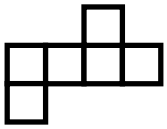
A. 

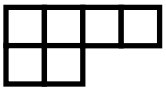
B. 

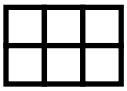
C. 

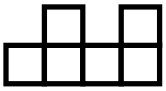
D. 

79. Which figure can be folded to make a cube?

A. 

B. 

C. 

D. 

80. Look at **Figure 1** and **Figure 2** below. What term best describes the transformation of **Figure 1** to **Figure 2**?
    A. translation
    B. dilation
    C. rotation
    D. reflection

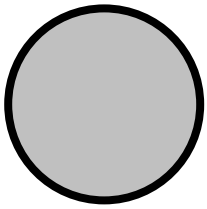


Figure 1

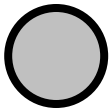


Figure 2