7th Grade Mathematics Assessment

Name: _____

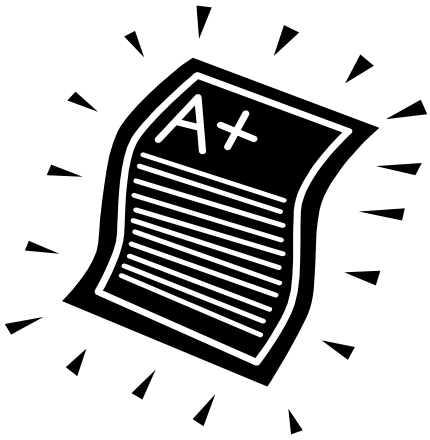
Date: _____

School: _____

District: _____

Achieve

Forecast Student Test Results



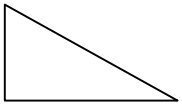
Increasing Achievement for Schools, Teachers, & Students

Pre Test

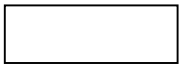
1,000 Series

Mathematics Reference Sheet

Area



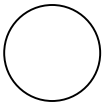
Triangle $A = \frac{1}{2} bh$



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

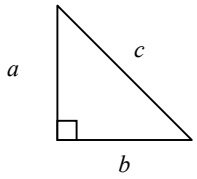
Use 3.14 or $\frac{22}{7}$ for π.

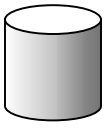
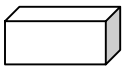
In a polygon, the sum of the measures of the interior angles is equal to $180(n - 2)$, where n represents the number of sides.

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

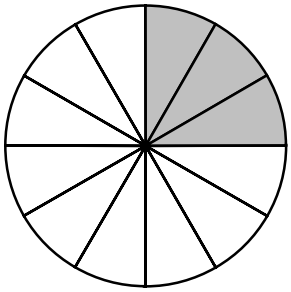
1 pound = 16 ounces
1 ton = 2,000 pounds

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

45. When multiplying a whole number greater than 1 by a negative fraction less than 0, the product is which of the following?
    A. greater than the whole number
    B. less than the whole number
    C. equal to 1
    D. none of the above

46. Which shows $9\frac{1}{10}$ written as a decimal?
    A. 9.1
    B. 9.2
    C. 9.25
    D. 9.33

47. What percent of the circle is shaded?



A. 40%
B. 20%
C. 25%
D. 30%

48. What is the value of the following expression?

$$4^5 - 3^4 =$$

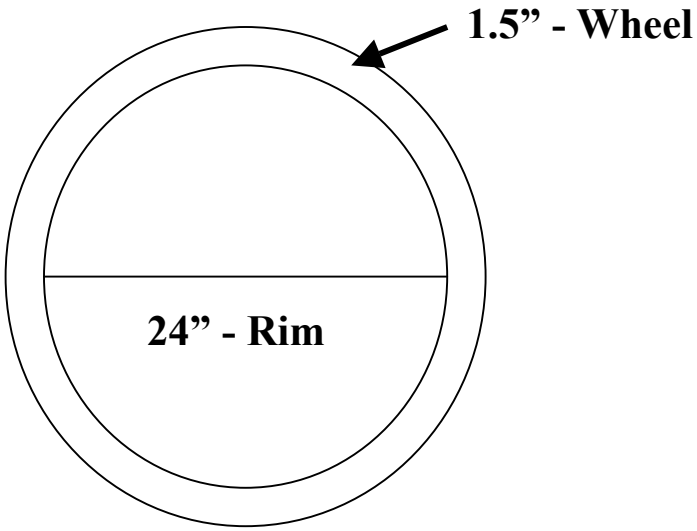
A. 175
B. 943
C. 997
D. none of the above

49. What is the scientific notation for 687,000,000?
A. 6.87×10^6
B. 6.87×10^9
C. 6.87×10^{10}
D. 6.87×10^8

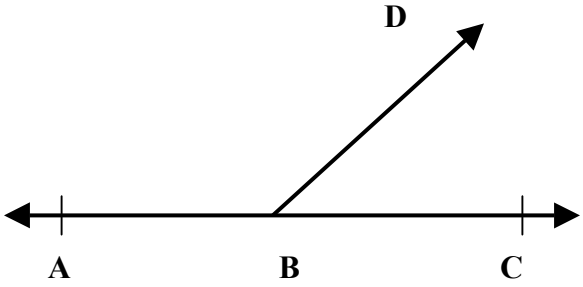
50. Which of the following is NOT true?
A. $-4 < -3$
B. $\frac{7}{8} > \frac{5}{6}$
C. $0 > -1$
D. $-\frac{4}{7} > \frac{1}{7}$

51. Round 309.50905 to the nearest thousandth.
A. 309.51
B. 309.5091
C. 309.509
D. 309.591

52. Of the numbers **123** and **131**, which number is prime?
    A. 123
    B. 131
    C. both
    D. neither



53. The rim of the bicycle wheel above has a diameter of 24 inches. When the tire is mounted on the wheel, the diameter of the wheel increases as shown. To the nearest tenth of an inch, how much does the circumference of the bicycle wheel increase after the tire is mounted?
    A. 75.4”
    B. 80.1”
    C. 9.4”
    D. 4.7”



54. Angle DBC is which type of angle?
    A. acute
    B. right
    C. obtuse
    D. straight

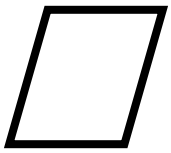
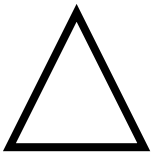
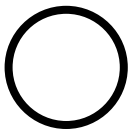
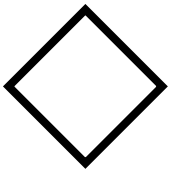
55. Jenni's Labrador Retriever is expecting puppies, and Jenni wants to enlarge the dog's pen. The dog pen currently measures 4 feet by 5 feet. If Jenni doubles the length and width of the pen, how will the area of the dog pen change?
    A. The area will remain the same.
    B. The area will be half as large.
    C. The area will be twice as large.
    D. The area will be four times as large.

56. Todd ran in a 5-kilometer race. He completed $\frac{2}{3}$ of the race. How many meters did he run?
    A. 3.3
    B. 33.3
    C. 333.3
    D. 3333.3

57. Which of these letters has both a vertical and horizontal line of symmetry?
    A. M
    B. T
    C. E
    D. X

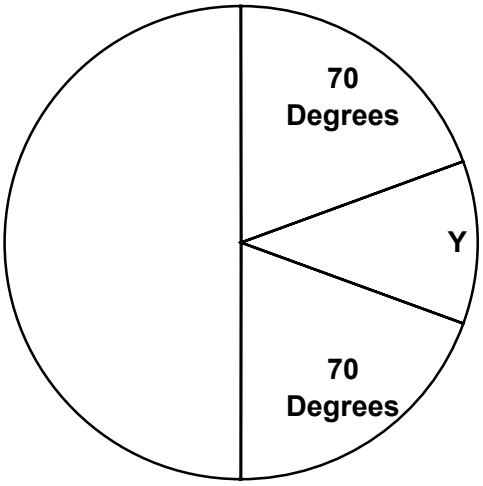
58. How many degrees would you rotate the letter W to look like the letter M?
    A. 45º
    B. 90º
    C. 180º
    D. 360º

59. Which of the following will NOT tessellate?

A.  B.  C.  D. 

60. How many degrees are in arc Y?

A. 30º
B. 280º
C. 70º
D. 40º



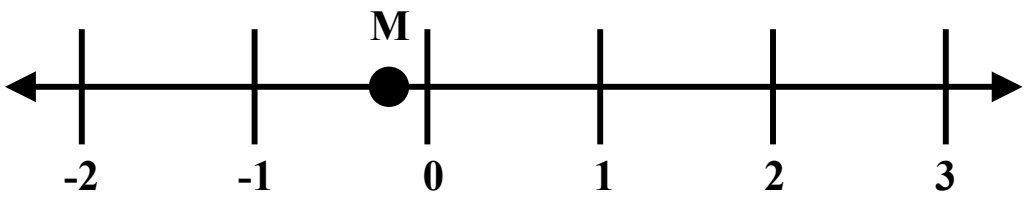
61. Which is the best estimate of the coordinate for **Point M** on the number line?

A. $-\frac{1}{2}$

B. $-\frac{1}{4}$

C. $-1\frac{3}{4}$

D. $-1\frac{1}{2}$



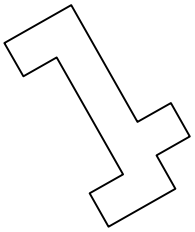
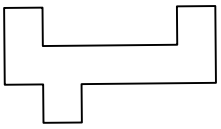
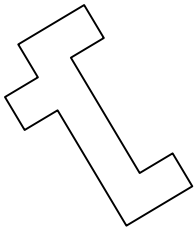
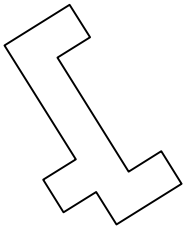


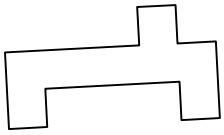
Figure A

62. Which figure is NOT a turn of **Figure A**?

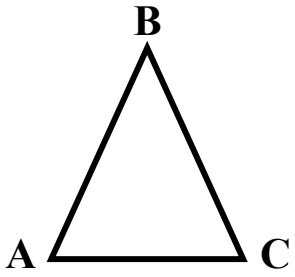
A. 

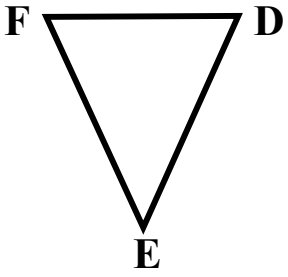
B. 

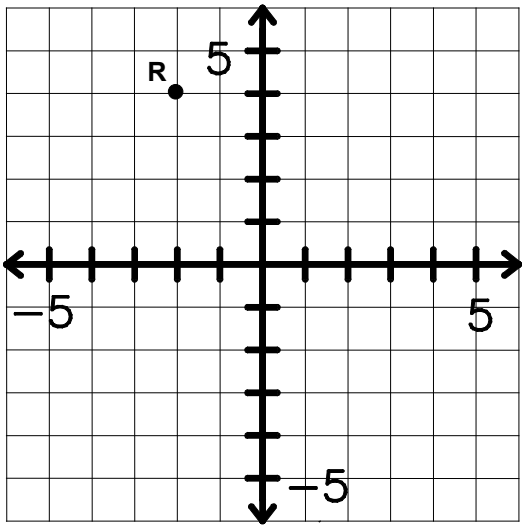
C. 

D. 

63. Triangles ABC and DEF are congruent. Which statement MUST also be true about triangles ABC and DEF?
    A. They are right triangles.
    B. They are similar triangles.
    C. They are scalene triangles.
    D. They are equilateral triangles.







64. Which ordered pair represents **Point R**?
    A. (4, -2)
    B. (2, 4)
    C. (-2, 4)
    D. (4, 2)

65. Given the expression **12 + 5 x $\frac{1}{2}$** , what is the correct order of operations?

    A. Add 12 and 5, then multiply by $\frac{1}{2}$

    B. Add 12 and 5, then multiply by 2

    C. Multiply 5 by 2, then add 12

    D. Multiply 5 by $\frac{1}{2}$, then add 12

66. Solve: $\mathbf{\frac{8}{9} \div \frac{2}{3} =}$

A. $\frac{3}{4}$

B. $\frac{16}{27}$

C. $\frac{7}{8}$

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

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

4 (6 + 4) ÷ 2 =

A. multiply, add, divide
B. add, divide, multiply
C. divide, add, multiply
D. add, multiply, divide

68. Solve: **9 (12 + 4) ÷ 2 =**

A. 88
B. 110
C. 56
D. 72

69. Demetrius began a savings account by depositing $25 of his birthday money. Each week thereafter, he deposited $3 of his $10 allowance into the savings account. Write an algebraic statement to represent his savings account at any week of the coming year.

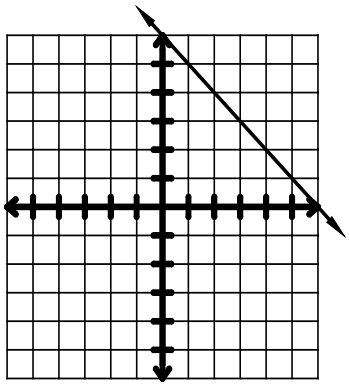
A. $3w + 25 =$
B. $25w + 3 =$
C. $10w + 25 =$
D. $wx + 10 =$

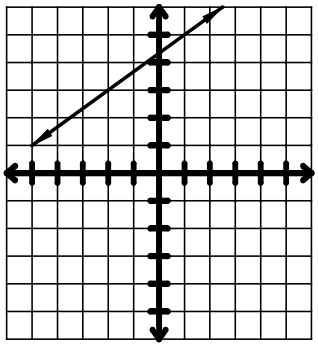
70. Look at the function table below. Which of the following shows how to determine the value of y for any given value of x?

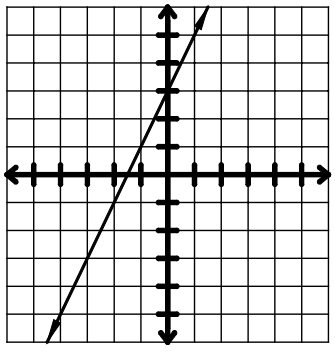
A. $y = x + 3$
B. $y = x - 2$
C. $y = x(2) + 3$
D. $y = x \div 2 + 1$

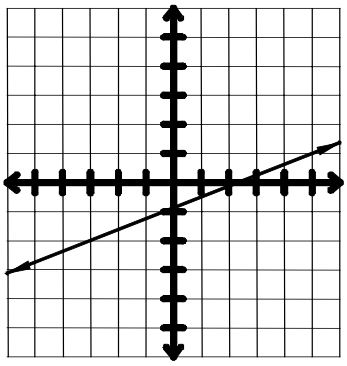
x	***y***
0	3
2	7
4	11
6	15
8	19
10	23

71. Which graph represents the line containing the points **(5, 1)** and **(-3, -2)**?

A. 

B. 

C. 

D. 

72. Evaluate $\frac{7}{8}ab$ if $a = 3$ and $b = 3\frac{2}{3}$.

A. $\frac{21}{11}$

B. $9\frac{5}{8}$

C. $12\frac{5}{8}$

D. $18\frac{2}{3}$

73. Two quarters are flipped at the same time. What is the probability of both quarters landing on heads?

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

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

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

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

74. A jar has 10 marbles. There are 4 green, 3 black, 2 white, and 1 blue marble. What is the probability of drawing a black or blue marble?

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

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

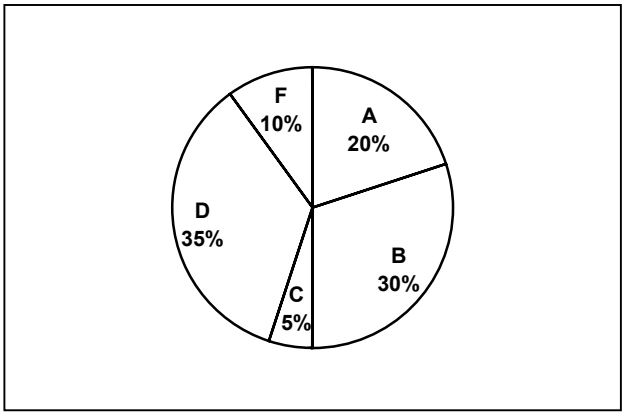
C. $\frac{3}{10}$

D. $\frac{2}{5}$

75. Ellen has taken 4 math tests. Her average so far is 88. What score does she have to make on her next test in order to increase her average by 2 points?
    A. 90
    B. 92
    C. 95
    D. 98

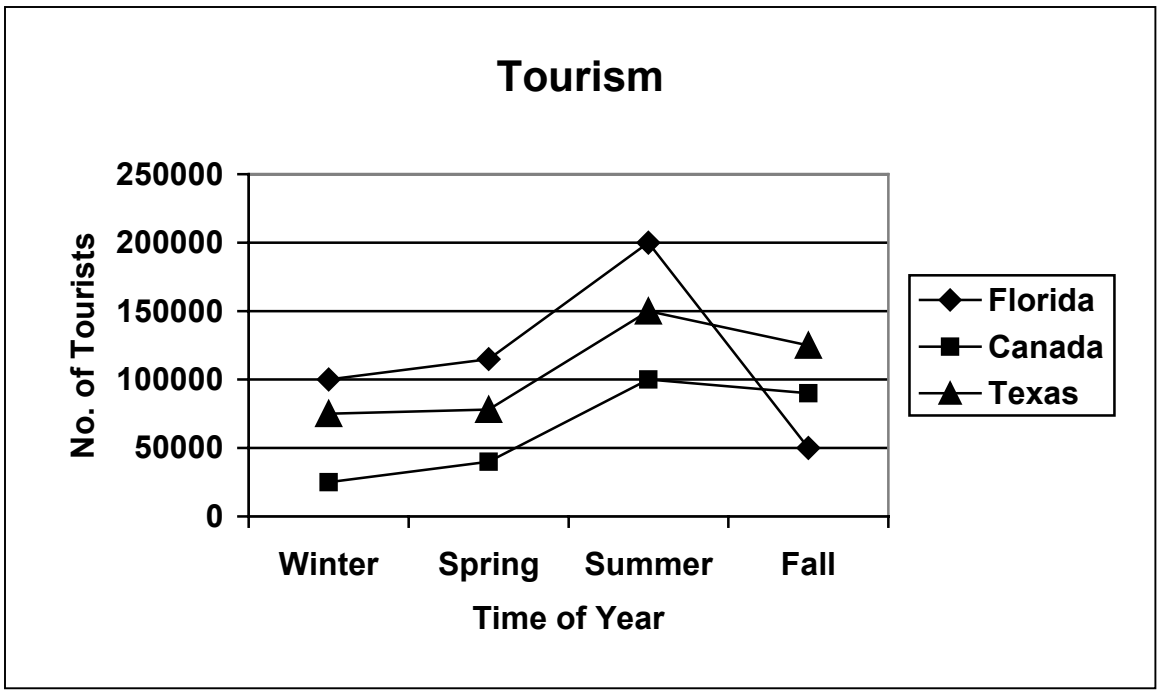
76. How many ways can three people line-up at a bus stop?
    A. 4 ways
    B. 6 ways
    C. 8 ways
    D. 10 ways

80 people took a test. Grade distribution is shown on the graph below. Use the pie chart to answer the following two questions.



77. How many students failed the test?
    A. 10 students
    B. 8 students
    C. 12 students
    D. none of the above

78. How many students made a C or better on the test?
    A. 44 students
    B. 5 students
    C. 55 students
    D. none of the above



The line graph above shows tourism information for Florida, Canada, and Texas. Using the graph, answer the following question.

79. When is tourism higher in Texas than in Florida?
    A. winter
    B. spring
    C. summer
    D. fall

80. Look at the scatter graph below. What is the acceleration of the ball between 0 and 3 seconds?
    A. 0 m/s
    B. 2 m/s
    C. 1 m/s
    D. 3 m/s