7th Grade District Assessments - General Guidelines

Teachers will read the following directions to their students before each DSPA: Read each problem carefully, and answer each problem completely showing your work in the spaces provided.

**MA-07-01**   To be given after the completion of Chapter 3. (No Calculators)

MA-07-02   To be given after the completion of Chapter 5. (No Calculators)

MA-07-03   To be given after the completion of Chapter 7. (No Calculators)

MA-07-03   To be given after the completion of Chapter 8. (No Calculators)

MA-07-05   To be given after the completion of Chapter 9. (Calculator use is okay)

Name_____

1. (10 pts) Ginny and Hermione were playing a game with tile spacers, which look like little plus signs and minus signs. Each reached into a bag of tile spacers, and pulled out as many as they could. They then figured out the **value** of each of their handfuls.
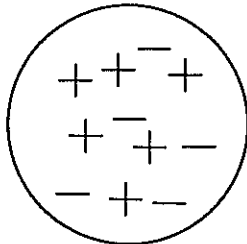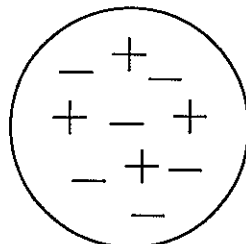
Ginny's Handful   Hermione's Handful

a. What is the total value of Ginny's handful?

b. What is the total value of Hermione's handful?

2. (15 pts) Draw tile spacers for each addition sentence below and find the answer.
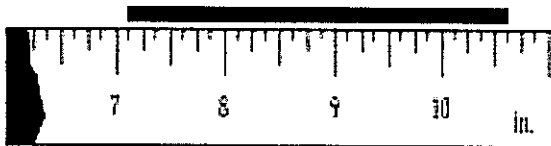
a. $5 + (-3) =$

b. $-5 + (-3) =$

c. $5 + (-9) =$

3. (10 pts)   Circle the terms and solve the following problems. Show your work.

a. $3(4+3)+3(-6) =$

b. $-6+9(-2)+3(3) =$

4. (5 pts)   Ross measured the length of the room and found it to be in 4 yards, 2 feet and 2 inches long. How many inches is that? Show your calculations.

5. (5 pts)   What is the length in inches of the line segment shown here?

6. (10 pts)   With a ruler, measure the length of the segment below. Right your answer two different ways; first in inches and second in centimeters.

_____   Answer in inches:

Answer in centimeters:

7. (30 pts)   Calculate (find the answer):

a. $8 \cdot (-3) =$ b. $-12 + (-3) =$ c. $-7 + (-4) =$
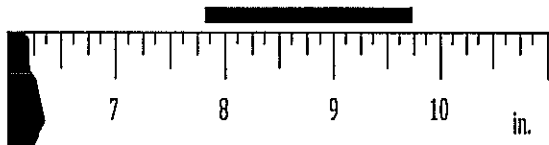
d. $24 + (-3) =$ e. $-16 + (-4) =$ f. $(-6) \cdot (-6) =$

8. (5 pts)   What is the length in inches of the segment shown here?

9. (10 pts)   Show a diagram of +'s and −'s that each expression could represent then find the value of the expression.

a. $-5 + 6 + (-2) =$ b. $3(-5) =$

Name_____

1. (5 pts)   A class contains 12 boys and 15 girls. The teacher chooses a student from the class at random. What is the probability the teacher will choose a boy?

2. (15 pts)   Five friends got math scores of 95, 73, 98, 86, and 73 on a math test.

    a. What is the mean?

    b. What is the median?

    c. What is the range?

3. (10 pts)   Below is a stem-and-leaf plot of temperatures.

```
3 | 2
4 | 5 5
5 | 3
6 | 7
7 | 8 8    | Key:
8 | 9      |
9 | 0      | 3|2    mean: 32
```

    a.   What is the median temperature?

    b.   Find the range.

4. (10 pts)   Your teacher was playing Monopoly and rolled a fair die (a six sided number cube).

    a. What is the probability of getting a 5?

    b. What is the probability of getting a number less than 4?

5. (15 pts)   There are 36 green, 22 white, 30 purple and 14 blue gumballs in the gumball machine. Sharee wants to get a white or green gumball.

a. What is the probability of getting a **white** gumball?

b. What is the probability of getting a **green** gumball?

c. What is the probability that she will get a white or green gumball?

6. (20 pts)   The following is a graph of rainfall amounts in Portland, OR.
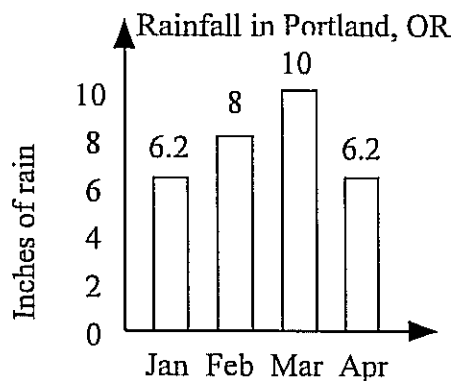
a. What is the range of rainfall shown?

b. What is the median amount of rainfall shown?

c. What is the mode amount of rainfall?

d. What is the mean amount of rainfall for the four months shown?

7. (15 pts)   A bag contains four green gumballs, three blue gumballs, and two red gumballs, all the same size and shape.

a. What is the probability of choosing a red gumball?

b. What is the probability of choosing a blue gumball?

c. What is the probability of choosing a green gumball?

8. (10 pts)   The ages of 12 people are shown in this stem and leaf plot.

```
1 | 1 1 2 2 2 3 7
2 | 0 4 5 9
3 | 4
```

1 | 1 means 11
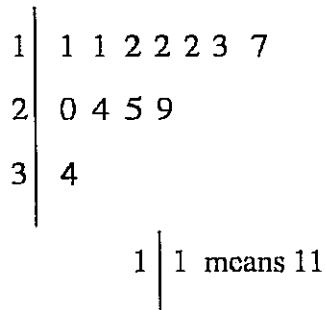
a. What is the median age?

b. What is the mode age?

Name_____

1. (10 pts)   Consider the list of numbers below.

        0.34   0.4   0.034   0.304   0.314

        a. Which number is the smallest?

        b. Which number is the greatest?

2. (10 pts)   Calculate. Show your work.

    a. $4\frac{1}{3} + \frac{3}{4} =$ b. $6\frac{4}{5} - 3\frac{2}{3} =$

3. (20 pts)   Calculate. Show your work.

    a. $12.003 + 0.76 =$ b. $1.8 - 0.9 =$

    c. $7 - 0.62 =$ d. $4.05 + 0.5 =$

4. (5 pts)   Which group of numbers is in order from least to greatest (from left to right)?

A. 0, –2, 4, –6

B. –6, 4, –2, 0

C. –6, –2, 0, 4

D. None of these

5. (5 pts)   Place these numbers in order from least to greatest (from left to right).

¾   20%   .14   1.2   60%

6. (5 pts)   Label the following numbers at their approximate place on the number line

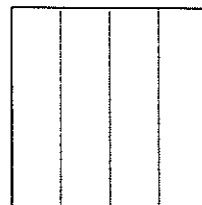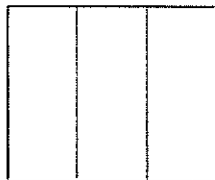$$\longleftarrow\!\!+\!\!\longrightarrow\!\!+\!\!\longrightarrow$$

0   1
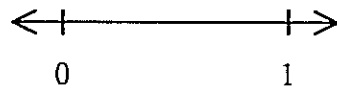
a. $\frac{1}{4}$ b. 0.3   c. $\frac{2}{3}$ d. 0.6

7. (10 pts)   Find the answer to each problem below. If you wish, you may use any of the figures below that might be useful to calculate each product.
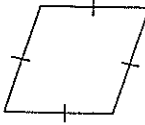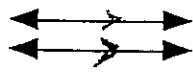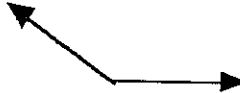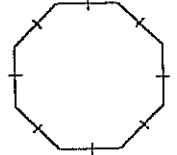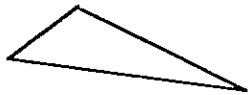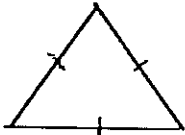
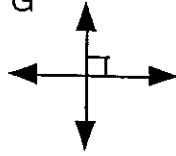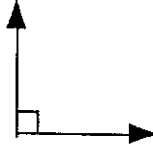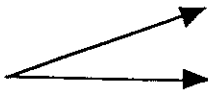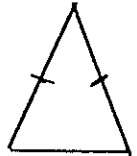a. $\frac{1}{2} \cdot \frac{2}{3}$ b. $\frac{3}{4} \cdot \frac{1}{5}$

8. (5 pts)   Davis will be making cornbread and pumpkin pie. The recipe for cornbread calls for $2\frac{1}{4}$ cups of flour while the recipe for the pumpkin pie calls for $1\frac{2}{3}$ cup of flour. How much flour will he need to complete both recipes? Show your work.

9. (30 pts)   Matching. Place the correct letter in each blank so that the name of the figure matches up with the diagram of the figure.

_____ Acute Angle

_____ Scalene Triangle

_____ Obtuse Angle

_____ Right Angle

_____ Isosceles Triangle

_____ Regular Octogon

_____ Equilateral Triangle

_____ Rhombus

_____ Pair of Parallel Lines

_____ Pair of Perpendicular Lines

A	B
C	D
E	F
G	H
I	J

Name_____

1. (10 pts)   Simplify the following problems and show your work.

$$\frac{2}{3} \div \frac{1}{2}$$ $$\frac{4}{3} \div \frac{5}{8}$$

2. (5 pts)   I got a great deal on hamburger, so I bought six pounds. I use ¼ of a pound for each serving. How many servings will I get out of the six pounds of hamburger?

3. (5 pts)   Denise has 12 yards of fabric. How many ties can be made from the fabric if each tie uses $\frac{3}{4}$ yard of fabric?

4. (10 pts)   Tim is dividing up a $2\frac{1}{2}$ pound bag of nuts into smaller portions.

   a. How many $\frac{1}{4}$ pound bags of nuts can be made from a $2\frac{1}{2}$ pound bag of nuts?

   b. How many $\frac{1}{2}$ pound bags of nuts can be made from a $2\frac{1}{2}$ pound bag of nuts?

5. (15 pts)   Evaluate each expression below using $a = 5$ and $b = 2$. Show your work.

a. ab

b. $a(b + b)$

c. $\frac{a}{b}$

6. (10 pts)   Evaluate each expression below using m = 3 and n = 7.

a. 3m + n

b. 2n - m

7. (5 pts)   On Monday, Ezra started a 520 page book. He read y pages on Monday and on Tuesday he read x pages. Which expression describes the number of pages left for him to read after those two days?

A. $520 - (x + y)$

B. $520 - x + y$

C. $x + y - 520$

D. $520 - (x - y)$

8. (5 pts)   In football, 6 points are scored for touchdowns, 1 point for the extra point and 3 points for field goals. Steve's team scored t touchdowns, e extra points and f field goals. Which expression represents the total points Steve's team scored?

A. $t + e + f$

B. $6t + e + 3f$

C. $3t + e + 6f$

D. $6t - e + 3f$

9. (5 pts)   What value of m makes the following equation true? $m + 6 = 18$

10. (5 pts)   What value of y makes the following equation true? $y - 3 = 8$

11. (5 pts)   What value of t makes the following equation true? $36 + t = 12$
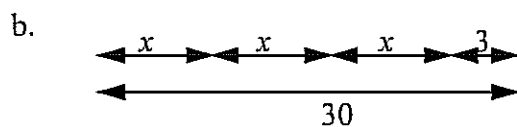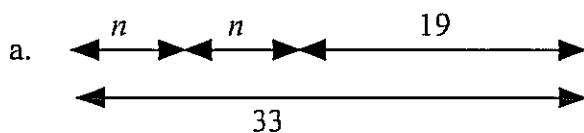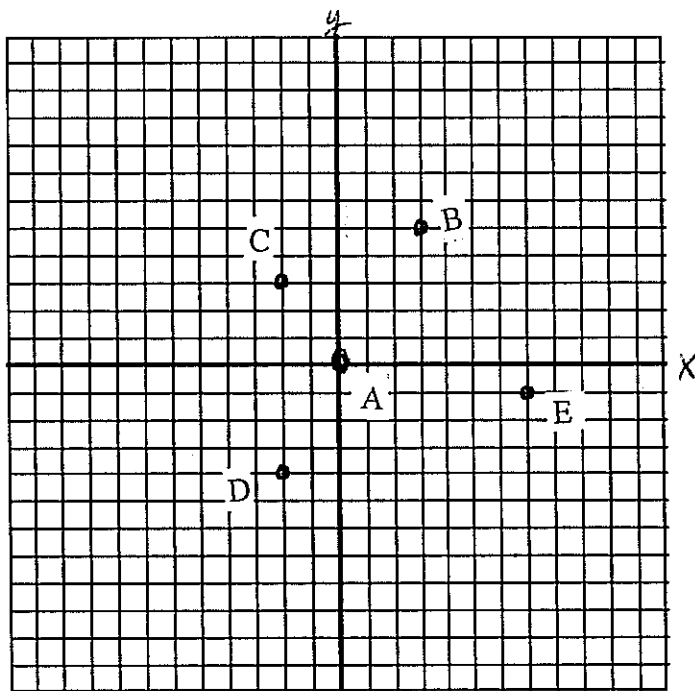
A. -24

B. 24

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

D. 48

12. (10 pts)   Find the value of the variables.

a.

n n 19

33

b.

x x x 3

30

13. (5 pts)   Match the letter on the graph to the correct order pair.
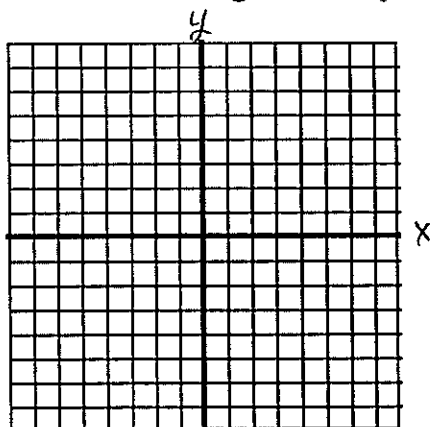

_____ (3,5)   _____ (-2,3)   _____ (7,-1)

_____ (-2,-4)   _____ (0,0)

14. (5 pts)   The following order pairs are solutions to the equation $x + y = 2$

(4,-2) (2, 0) (-1,3)

Graph these three ordered pairs, and also name two more ordered pairs that are
solutions to the equation. _____ _____ Graph these two points also.

Draw a line through the five points to make a line.

Name_____

1. (5 pts)   Solve for v in this equation $\frac{60 \text{ students}}{3 \text{ teachers}} = \frac{v}{15 \text{ teachers}}$?

2. (5 pts)   355 ml of cola equals 12 ounces. How many ml of cola equals 16 ounces?

3. (5 pts)   On a road map, 1 inch represents 30 miles. How many miles would 3.5 inches represent?

4. (5 pts)   A telephone pole's shadow is 25 feet long at the same time that the shadow of a 6 foot tall man is 5 feet long. How tall is the telephone pole? Be sure to draw a diagram of the situation and write your answer in a sentence.

5. (15 pts) Solve:

    a.   6 is what percent of 8?

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    b.   20% of what number is 12?

    c.   30% of 60 is what number?

6. (5 pts)   Most people will leave a 15% tip for good service at a restaurant. If the bill for a meal is $24, what would such a tip be?

7. (10 pts)   A music player is regularly $150 but it is on sale for 15% off the price.

   a. What is the discount on the music player? (How much money is taken off the price)?

    b. What is the sale price? (The price after the discount).

8. (10 pts)   What is the **circumference** of a circle that has a radius of 9 cm?

9. (5 pts)   Bill is making a circular vegetable garden. He needs to put a fence around the garden to keep the rabbits from eating everything. How much fencing will he need? Explain.

25 ft
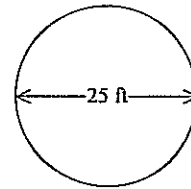
10. (10 pts)   What is the **area** of a circle that has a radius of 12 cm? Use $\pi = 3.14$
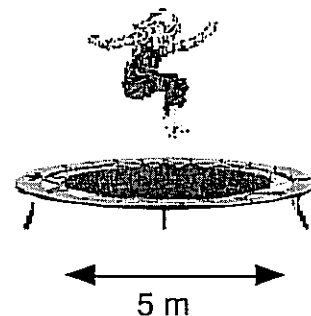
12 cm
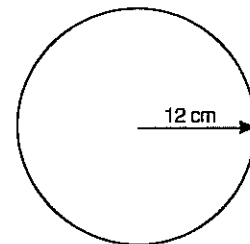
11. (5 pts)   A circular trampoline has a diameter of 5 meters. Which expression could be used to find the **area** of the trampoline in square meters?

A. $5 \cdot \pi$

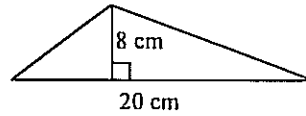B. $2.5 \cdot \pi$

C. $5^2 \cdot \pi$

D. $(2.5)^2 \cdot \pi$

5 m

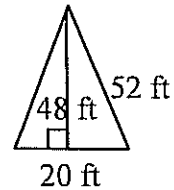12. (5 pts)   Find the area of the figure.

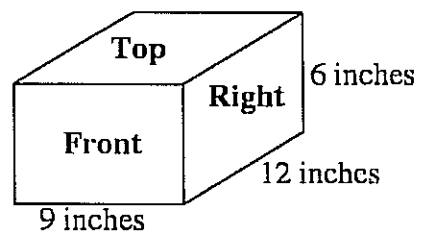A. 80 cm²

B. 160 cm²

C. 40 cm²

D. None of these

13. (5 pts)   Find the area of this triangle:

14. (10 pts)   A rectangular solid is shown here.

a.   What is the total surface area of all six faces?

b.   What is the volume?