

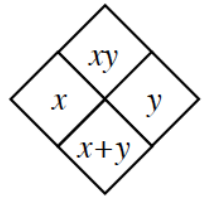
Pre-Algebra Problem Set 13

First Name _____ Last _____

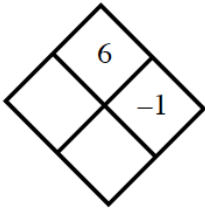
Assigned Thursday 12/12, due THURSDAY 12/19

NO Work Shown, NO Credit Given

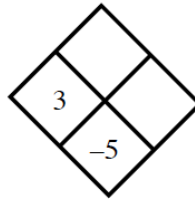
1. Complete each of the Diamond Problems below. The pattern used in the Diamond Problems is shown at right.



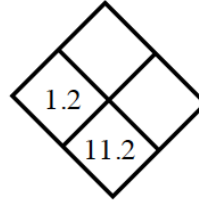
a)



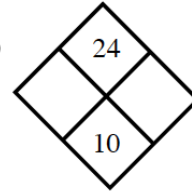
b)



c)



d)



2. a) $6 + 4(6 - 4)$

b) $6 + 4 \cdot 6 - 4$

c) $(6 + 4)(6 - 4)$

d) $(6 + 4)6 - 4$

3. Simplify each expression.

a) $3 - 2 \cdot 5 - 1$

b) $7(4 + 3 \cdot 2)$

c) $10 - 6 \div 2 \cdot 4 + 2$

d) $8 - 13 - (-4)$

e) $4 - (-7) \div (-2)$

f) $-7 + 3 - 20$

-----The work for #4 - #12 needs to be attached on a separate paper.-----

4. a) $\frac{3}{4} \div -6$

b) $-6 \div \frac{3}{4}$

c) $11\frac{2}{3} \div 1\frac{1}{4}$

d) $-2\frac{2}{3} \div (-\frac{1}{2})$

5. a) $\frac{3}{4} \cdot \frac{3}{5}$

b) $\frac{9}{20} \cdot \frac{4}{9}$

c) $3\frac{1}{6} \cdot 1\frac{1}{3}$

d) $-2\frac{1}{4} \cdot 3\frac{1}{5}$

6. a) $3.62 \cdot 3.4$

b) $(0.26)(0.0008)$

c) $2.4 - 0.03$

d) $(-7.5)(-5.7)$

7. Lucy keeps track of how long it takes her to do the newspaper's crossword puzzle each day. Her recent times, in minutes, were: 7 22 20 12 18 19 10 20

a. What is the median of her data?

b. What is the mean?

c. What is the range?

8. A bag contains 4 brown marbles, 3 green marbles, 2 red marbles, and 1 purple marble. Calculate the probability of *drawing each color*, and write each answer as a **fraction**, as a **percent**, and as a **decimal**.

9. Simplify each expression.

a) $7 \cdot 2 + 4 - 2(7 + 3)$

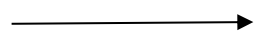
b) $6 \cdot 3 + 3 \cdot 4 - 8$

c) $3^2 + 5(1 - 3) + 4 \cdot 5 + 1$

d) $(8 + (-12)) + 10 + 2$

e) $8 + 2(37 - 19)$

f) $(17 - 11)(17 - 10)(17 - 9)$



10. a) $\frac{3}{4}$ of $1\frac{2}{3}$

b) $3\frac{1}{2} \cdot 2\frac{2}{3}$

c) $2\frac{2}{3} \cdot 3\frac{1}{2}$

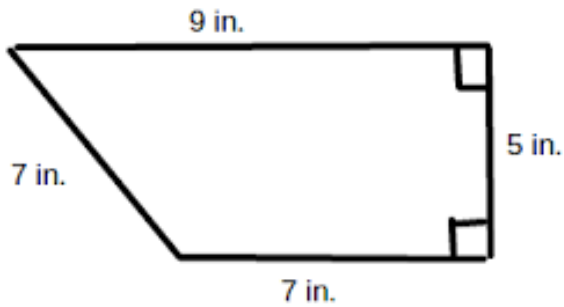
d) $3\frac{1}{2} \div 2\frac{2}{3}$

e) $2\frac{2}{3} \div 3\frac{1}{2}$

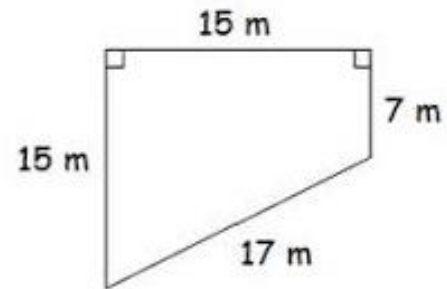
f) $1234 - 5\frac{3}{8}$

11. Find the area of each figure.

a)



b)



12. Evaluate each expression when $a = -3$, $b = 4$, $x = 8$, and $y = -10$.

a) $a - b - x$

b) $|a - b| + |x - y|$

c) $x - 7\frac{4}{11}$

d) ba^2

e) $y^3 - y^2$

f) $a + x(b - y)$