Name:_____**Date:**_____**Per:**_____

Midterm Review 1

Read each problem carefully. Show all of your work, circle your answers! Good luck!

Evaluate the expression. (1.1-1.2)

1. $2^3 - 3 \cdot 5^2$

$8 - 3 \cdot 25$
$8 - 75$
-67

2. $7[(9 + 6) \div 3]$

$7[15 \div 3]$
$7[5]$
35

3. $21 - |n|$ when $n = -13$

$21 - |-13|$
$21 - 13$
8

4. $-q + |2q|$ when $q = -3$

$-(-3) + |2 \cdot -3|$
$3 + |-6|$
$3 + 6$
9

5. $-3z - 2$ when $z = -6$

$-3(-6) - 2$
$18 - 2$
16

Translate the verbal phrase into an algebraic expression, equation, or inequality. (1.3-1.4)

6. The quotient of a number y squared and 6 is greater than or equal to 20.

$\frac{y^2}{6} \geq 20$

7. A newsstand buys newspapers for $.75 each and magazines for $2.99 each.

a) Write an algebraic expression for the total cost of the newsstand's stock.

$0.75n + 2.99m$

b) Find the total cost of 30 newspapers and 20 magazines.

$82.30

8. Write a rule for the given function. **(1.6)**

Input, x	1	2	3	4
Output, y	−3	−6	−9	−12

$\frac{\Delta y}{\Delta x} = \frac{-3}{1} = -3$ $y = -3x$

Classify the given number using all names that apply. (2.1)

9. $-\frac{2}{5}$

Rational

10. 1.2

Rational

Add, subtract, multiply or divide. (2.2-2.6)

11. $2.8 + (-5.3)$

−2.5

12. $-\frac{3}{10} + \frac{2}{5}$

$\frac{1}{10}$

13. $-0.5(-18)$

9

14. $24 \div (-8)$

−3

Simplify the expression. (2.5)

15. $-8(m + 2)$

$-8m - 16$

16. $\frac{15x - 40}{-5}$

$-3x + 8$

Solve each equation. (3.1-3.4)

17. $\frac{x}{7} = -9$

$x = -63$

18. $47 = -4z - 2z - 7$

$z = -9$

19. $\frac{8}{7} \cdot \frac{7}{8}(a-8) = 14 \cdot \frac{8}{7}$

$a - 8 = 16$
$a = 24$

Solve the given proportion or percent problem. (3.5-3.7)

20. $\frac{7}{8} = \frac{21}{-2p}$

$168 = -14p$
$p = -12$

21. $\frac{4}{7} = \frac{-3w+2}{-2w}$

$7(-3w + 2) = 4(-2w)$
$-21w - 14 = -8w$
$w = -\frac{14}{13}$

22. What percent of 65 is 13?

20%

23. What number is 12% of 140?

16.8

24. In a school cell phone survey of 375 students, 210 of the students surveyed said they own a cell phone. What percent of the students surveyed own a cell phone?

56%

25. Write the equation in function form: **(3.8)**

$$6x + 2y = 24$$
$$\underline{-6x \qquad\quad -6x}$$
$$\frac{2y}{2} = \frac{24 - 6x}{2}$$
$$y = 12 - 3x$$