ALGEBRA 1 - Unit Test 1, Chapters 1-11 Review

I. Simplify

1. $-4^3 = -64$

2. $-4-2^3+4\times5 =$
$-4-8+20 =$
$-12+20 = +8$

3. $|4-3| - |2-8| = -5$

II. SOLVE

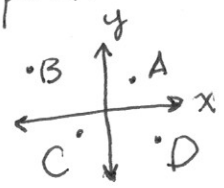
4. $4x - 4 + 3x = 8 - x$
$7x - 4 = 8 - x$
$8x = 12 \quad x = 1\frac{1}{2}$

5. $\left(\frac{1}{4}x + \frac{2}{3} = \frac{4}{9}\right)36$
$9x + 24 = 16$
$9x = -8 \quad x = -\frac{8}{9}$

6. $5.6x + .3 = 9.8$
$56x + 3 = 98 \quad x = \frac{95}{56} = 1\frac{39}{56}$
$56x = 95$

7. Which point is found in the fourth quadrant?

D

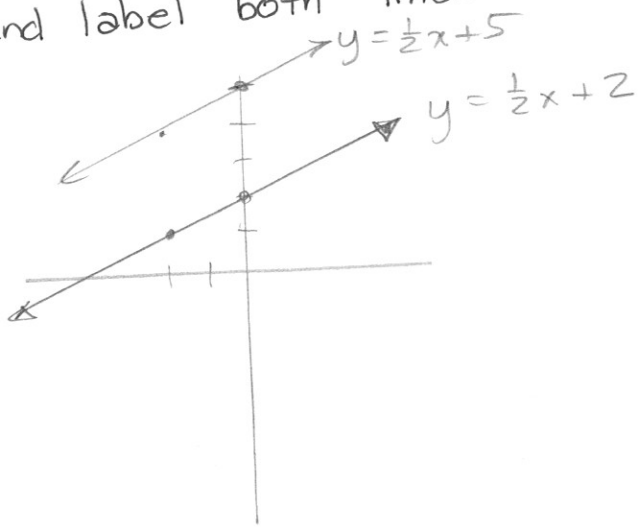


8. Give the slope and intercept of the following line.

$4y - x = 12$

$4y = x + 12$
$y = \frac{1}{4}x + 3$
$m = \frac{1}{4}$
$b = 3$

9. Write the equation of a line that passes through $(-2,1)$ and is parallel to line $y = \frac{1}{2}x + 5$. Graph and label both lines. 2/2



10. Find the equation for a line passing through points $(3, 1)$ and $(-1, -3)$.

(x_1, y_1) (x_2, y_2)

$m = \frac{-3-1}{-1-3} = \frac{-4}{-4} = 1$

$y = x + b$
$1 = 3 + b$
$b = -2$

$\boxed{y = x - 2}$

11. Which of the following lines are parallel?

a. $2y + 2x = 8$ $\quad 2y = -2x + 8 \quad y = -x + 4$

b. $y = x + 8 \quad y = x + 8$

c. $-3x - 3y = 8 \quad \frac{-3y}{-3} = \frac{3x}{-3} + \frac{8}{-3} \quad y = -x - \frac{8}{3}$

d. $y - x = 10 \quad y = x + 10$

a and c are ll and b and d are ll

12. Katherine borrowed \$2500 to open a bookstore. She made \$200 per day. If M = money and D = days, write an ~~eqt~~ equation to express her financial condition.

$M = 200D - 2500$

EXTRA CREDIT: How many days does Kathine need to operate to break even? 13 days