FCPS Common Assessment 1 - Algebra 1 - REVIEW Name:

1. Which set of numbers includes the elements of set *Z* that are both odd numbers and multiples of 7?

Z = {−21, −14, −7, 0, 7, 14, 21}

2. Order the numbers from least to greatest. $\frac{17}{3}$, 5.7, $\sqrt{27}$, $\sqrt{\frac{79}{3}}$

3. What is the value of *x* in this equation?

$4x + 2 – (3 + 3x) = 7$

4. The sum of three consecutive integers is 75. What are the three numbers?

5. How many solutions are there to this equation?

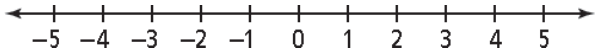
A. $3(2x + 5) = 10x – 4(x – 2)$

B. $4(2x – 1) = 2x + 3(2x – 2) + 2$

6. Solve the equation $E = v + Ir$ for r.

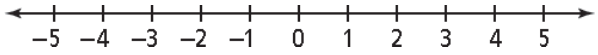
7. Solve the inequality.
$5(x + 1) - 10 \geq 2x + 3(x + 2)$

8. Graph the solution of the inequality on a number line.



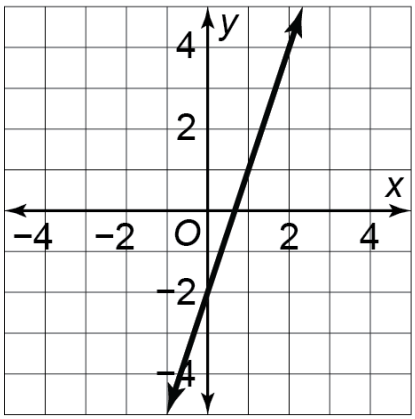
$2(x - 3) - (1 - x) > x - 1$

9. Solve & graph the compound inequality.



$9 - 4x \geq 5$ or $4(-1 + x) - 6 \geq 2$

10. Which equation matches the graph?



a) $y = 3x + 2$

b) $y = 1/3\ x - 2$

c) $y = 3x - 2$

d) $y = 2x + 1$

11. What is the equation of the line that passes through (–5, 0) and (4, 3)?

12. Hazel is saving up to buy a $400 bike. She saves $30 each week from her babysitting money. What linear equation represents the amount Hazel still has to save after *x* weeks?

13. What is the equation for the horizontal line that passes through (10, 7).

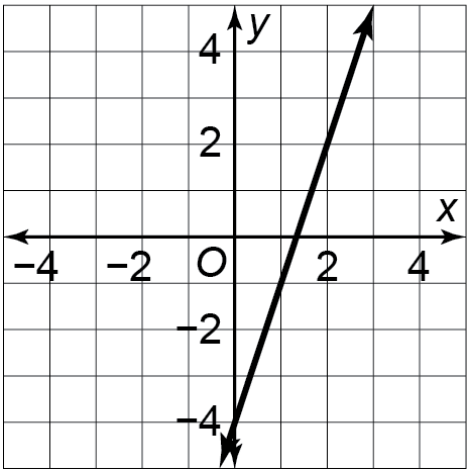
14. Which equation matches the graph?

a) y + 2 = 1/3 (x + 2)

b) y – 4 = 3 (x – 2)

c) y – 2 = 3 (x – 2)

d) y - 2 = 1/3 (x – 2)



15. What is an equation in point-slope form of the line that passes through (–3, –1) and has a slope of 2?

16. What is an equation in point-slope form of the line that passes through (2, −6) and (5, 3)?

17. Identify the *x*-intercept and the *y*-intercept of the graph of $12x - 4y = 48$?

18. Mike sells pens for $3 each and posters for $5 each. Complete the equation in standard form which determines the number of pens *x* and the number of posters *y* he must sell to make $60.

19. What is the equation in slope-intercept form of the line that passes through (4, 6) and is parallel to the graph of $y = \frac{1}{2}x + 7$

20. What is the *y*-intercept of the line $y - 14 = 6(x - 2.5)$?