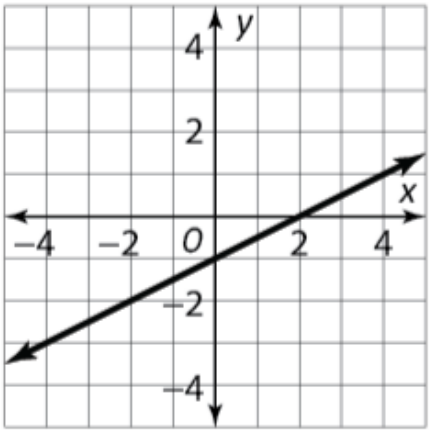
FCPS Algebra 1 Common Assessment 3 **Name** _____

#	Question
1	Solve for x. $6x - 4(3x - 5) = 2$ A. $x = \frac{11}{3}$ B. $x = 3$ C. $x = -3$ D. $x = -\frac{11}{3}$
2	How many solutions are there to the following equation? $5(x - 3) - 3x = 8x - 15 - 6x$ A. no solution B. exactly one solution C. exactly two solutions D. infinitely many solutions
3	Solve the compound inequality. $6 - x > 15$ or $2x - 9 \geq 3$ A. $x > 9$ or $x \leq 6$ B. $x < 9$ or $x \geq -6$ C. $x > -9$ or $x \leq -6$ D. $x < -9$ or $x \geq 6$
4	Solve the absolute value equation. $\lvert x - 2 \rvert - 7 = -3$ $x =$ [ ] , [ ] Choose from the following choices for x =. When entering, type choices carefully. $x =$ 6 , −6 $\quad\quad$ $x =$ 0 , 2 $x =$ 6 , −2 $\quad\quad$ $x =$ −6 , 2

5 Which equation matches the graph?



A. $y = \frac{3}{2}x + 1$

B. $y = \frac{1}{3}x + 1$

C. $y = \frac{1}{2}x - 1$

D. $y = \frac{3}{2}x - 1$

6 Which is an equation of the line through (–8, –4) and (4, 5)?

A. $y = \frac{3}{4}x + 2$

B. $y = -\frac{3}{4}x - 2$

C. $y = \frac{4}{3}x + \frac{31}{3}$

D. $y = -\frac{4}{3}x - \frac{1}{3}$

7 Which is the solution to the system of equations?

$4x + 2y = -1$
$3x + 4y = 3$

A. (0, −1)

B. (8, 0)

C. $(1, -\frac{7}{8})$

D. $(-1, \frac{3}{2})$

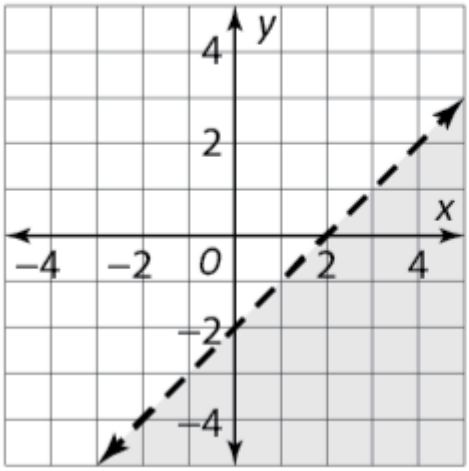
8 Choose the correct words from the drop-down menu to make a true statement about the system of equations.

$y = \frac{1}{5}x - \frac{2}{5}$
$x - 5y = 2$

Using substitution, the system has Choose... .

Choose...
one solution
infinitely many solutions
no solution

9 Which inequality does the graph represent?



- A. $y > x - 2$
- B. $y < x - 2$
- C. $y > -x - 2$
- D. $y < -x - 2$

10 Simplify: $(-7x - 5) - (-9x^2 + 8x + 7)$. Choose the standard form of the answer.

- A. $-16x^2 - 15x - 12$
- B. $9x^2 - 15x - 12$
- C. $-9x^2 + x - 2$
- D. $9x^2 + 56x - 35$

11 Find the product.
$(5x - 7)^2$

- A. $25x^2 - 70x + 49$
- B. $25x^2 + 70x - 49$
- C. $25x^2 + 49$
- D. $10x^2 - 24x - 14$

12 Factor out the greatest common factor from the terms of the polynomial $8x^4 - 12x^3 + 16x$.

- A. $4x^3(2x - 3) + 18$
- B. $4x(2x^3 - 3x^2 + 4)$
- C. The expression is already fully factored.
- D. $8x^4 - 4x(3x^2 + 4)$

13 What is the factored form of $y^2 - 5y + 4$?

- A. $(y - 1)(y - 4)$
- B. $(y - 1)(y + 4)$
- C. $y(y - 5) + 4$
- D. The expression is already fully factored.

14 What is the factored form of $y^2 + xy - 6x^2$?

- A. $(y - 3x)(y + 2x)$
- B. $(y - 2x)(y + 3x)$
- C. $y(y + x) + x(y - 6x)$
- D. The expression is already fully factored.

15 Factor $15y^2 + 10y - 40$ **completely.**

- A. $5y(3y + 2) - 8$
- B. $(3y + 21)(5y - 1)$
- C. $5(y - 1)(3y + 8)$
- D. $5(y + 2)(3y - 4)$

16 Factor the perfect square trinomial $x^2 - 2x + 1$.

- A. $(x - 1)^2$
- B. $(x - 1)(x + 1)$
- C. $(x + 1)^2$
- D. $(x - 2)^2$

17 Evaluate the expression for $x = 2$ and $y = 4$. Enter your answer in the box.

$16x^0 + 2x^2 \cdot y^{-1}$

[ ]

18 Choose the answer that shows 5^{-15} rewritten using a positive exponent.

- A. -5^{15}
- B. -15^{5}
- C. $\frac{1}{15^{5}}$
- D. $\frac{1}{5^{15}}$

19 Which exponential function matches the table?

x	0	1	2	3	4
$f(x)$	3	12	48	192	768

- A. $f(x) = \frac{1}{4}(12)^{x}$
- B. $f(x) = 12\left(\frac{1}{3}\right)^{x}$
- C. $f(x) = 3(4)^{x}$
- D. $f(x) = \frac{1}{3}(4)^{x}$

20 Use the drop-down menus to complete the sentence.

The sequence 540, 180, 60, 20, $\frac{20}{3}$ has a common [Choose...] , so it [Choose...] a geometric sequence.

[Choose...] term ratio difference

[Choose...] is is not