Top 10 V5 Key

Monday, April 14, 2014
9:44 AM

Name:
Period:

1) Simplify

$3 - 5 \cdot 4 \div (12 - 2 \cdot 6) - 3^2$

$12 - 12$

$3 - 5 \cdot 4 \div 0 - 3^2$

$3 - 5 \cdot 4 \div 0 - 9$

$3 - 20 \div 0 - 9$

undefined

2) Simplify

$-3(4x - 2) + 2(2x - 4) - 5x$

$-12x + 6 + 4x - 8 - 5x$

$-12x + 4x - 5x + 6 - 8$

$-13x - 2$

3) Solve

$-\frac{2}{3}x + 5 = 7$

$-5 \quad -5$

$-\frac{2}{3}x = 2$

$\left(-\frac{3}{2}\right)\left(-\frac{2}{3}\right)x = \frac{2}{1}\left(-\frac{3}{2}\right)$

$x = \frac{-6}{2}$

$x = -3$

4) Graph the linear equation

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

x	y
0	1
2	6
4	11

$y = \frac{5}{2}(0) + 1$

$y = 1$

$y = \frac{5}{2}\left(\frac{2}{1}\right) + 1$

$y = \frac{10}{2} + 1$

$y = 5 + 1$

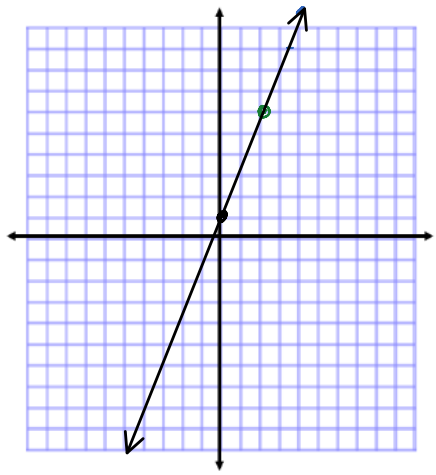
$y = 6$

$y = \frac{5}{2}\left(\frac{4}{1}\right) + 1$

$y = \frac{20}{2} + 1$

$y = 10 + 1$

$y = 11$



5) Solve and graph on a number line

$-4x + 10 < 2x - 8$

$-2x \quad -2x$

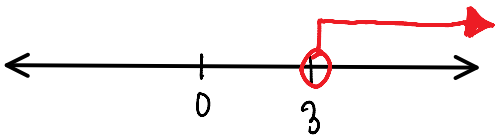
$-6x + 10 < -8$

$-10 \quad -10$

$-6x < -18$

$-6 \quad -6$

$x > 3$



6) Solve the system of linear equations

① $y = 2x - 3$

$3x - 2y = 10$

$3x - 2(2x-3) = 10$

$3x - 4x + 6 = 10$

$-x + 6 = 10$

$-6 \quad -6$

$-x = 4$

$-1 \quad -1$

$x = -4$

② $y = 2x - 3$

$y = 2(-4) - 3$

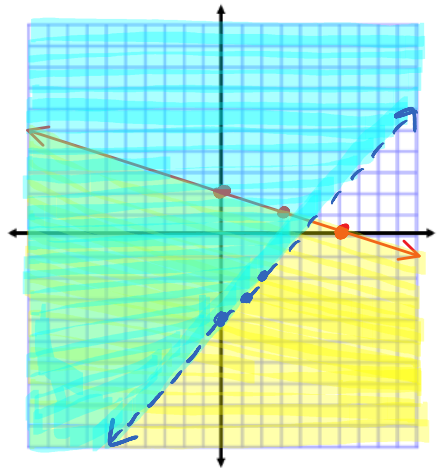
$y = -8 - 3$

$y = -11$

③ $(-4, -11)$

7) Graph the system of linear inequalities

- $y < -\frac{1}{3}x + 2$
- $y \geq x - 4$



8) Find the zeroes of the quadratic function

$0 = -2x^2 - 4x - 6$

$a = -2$

$b = -4$

$c = -6$

Does not factor

$a \cdot c$

12

-4

b

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$x = \frac{-(-4) \pm \sqrt{(-4)^2 - 4(-2)(-6)}}{2(-2)}$

$\sqrt{16 - 48} =$

$\sqrt{-32}$

*can not take the square root of a negative number

No zeros

9) Graph the quadratic function

$y = 2x^2 + 8x + 4$

① $x = \frac{-b}{2a}$

$x = \frac{-(8)}{2(2)}$

$x = -2$

② $y = 2(-2)^2 + 8(-2) + 4$

$y = 2(4) + -16 + 4$

$y = 8 - 16 + 4$

$y = -8 + 4$

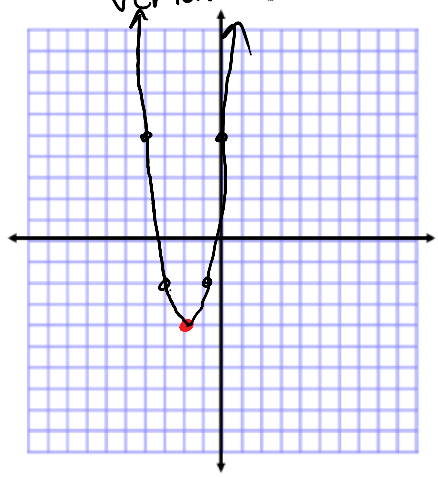
$y = -4$

③ $1(a) = 2$

$3(a) = 6$

$5(a) = 10$

Vertex: $(-2, -4)$



10) Simplify the radical $\sqrt{72} = \sqrt{36 \cdot 2} = \sqrt{36} \cdot \sqrt{2}$

$\boxed{6\sqrt{2}}$