

Top 10 V3 Key

Friday, March 28, 2014  
9:44 AM

Name:  
Period:

key

1) Simplify

$$12 - 6 \div 3 \cdot 4 - 9$$

$$12 - 6 \div 3 \cdot 4 - 9$$

$$12 - 2 \cdot 4 - 9$$

P  
E  
M  
D  
AS

$$12 - 8 - 9$$

$$4 - 9$$

$$-5$$

2) Simplify

$$-2(x+8) - 5(3x-4)$$

$$-2x - 16 - 15x + 20$$

$$-2x - 15x - 16 + 20$$

$$-17x + 4$$

3) Solve

$$5x + 12 = 8x - 3$$

$$-8x - 8x$$

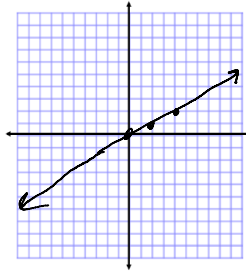
$$-3x + 12 = -3$$

$$-12 - 12$$

$$-3x = -15$$

$$\frac{-3x}{-3} = \frac{-15}{-3}$$

$$x = 5$$



4) Graph the linear equation

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

x	y
0	0
2	1
4	2

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

$$y = \frac{1}{2}(2) \rightarrow y = 1$$

$$y = \frac{1}{2}(4) \rightarrow y = 2$$

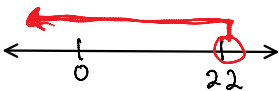
5) Solve and graph on a number line

$$3 \cdot \frac{x-4}{2} < 6 \cdot 3$$

$$x - 4 < 18$$

$$+4 \quad +4$$

$$x < 22$$



6) Solve the system of linear equations

$$-2(3x + 4y = 11) \rightarrow$$

$$3(2x - 3y = -8)$$

$$+ \begin{array}{r} -6x - 8y = -22 \\ 6x - 9y = -24 \\ \hline -17y = -46 \end{array}$$

$$y = 2.7$$

$$3x + 4(2.7) = 11$$

$$3x + 10.8 = 11$$

$$-10.8 \quad -10.8$$

$$(0.06, 2.7)$$

$$3x = 0.2$$

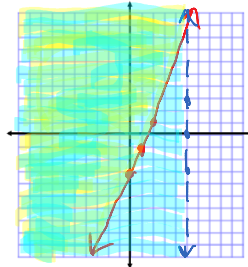
$$x = 0.0\bar{6}$$

7) Graph the system of linear inequalities

- $y \geq 2x - 3$
- $x < 5$

x	y
0	-3
1	-1
2	1

x y  
5 5  
5 5  
5 5  
Any number



8) Find the zeroes of the quadratic function

$$0 = 2x^2 - 4x - 16$$

$$a \cdot c = 2 \cdot -16 = -32$$

$$b = -4$$

$$-8 \quad +4$$

$$-4$$

$$0 = 2x^2 - 8x + 4x - 16$$

$$0 = (2x^2 - 8x) + (4x - 16)$$

$$0 = 2x(x - 4) + 4(x - 4)$$

$$0 = (2x + 4)(x - 4)$$

$$2x + 4 = 0$$

$$\frac{-4}{2} = \frac{-4}{2}$$

$$Rx = -2$$

$$\text{and } x - 4 = 0$$

$$\frac{+4}{+4} = \frac{+4}{+4}$$

$$x = -2 \text{ and } x = 4$$

9) Graph the quadratic function



$$/ -4 \backslash \quad 0 = (2x + 4)(x - 4)$$

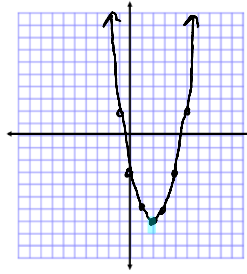
9) Graph the quadratic function

$$y = x^2 - 4x - 3$$

$$x = \frac{-b}{2a} \quad x = \frac{-(-4)}{2(1)} \rightarrow x = 2$$

$$y = (2)^2 - 4(2) - 3 \rightarrow y = 4 - 8 - 3$$

$$y = -7$$



vertex: (2, -7)

$$x = -2 \text{ and } x = 4$$

$$\begin{aligned} 1(a) &= 1 \\ 3(a) &= 3 \\ 5(a) &= 5 \end{aligned}$$

10) Simplify the radical

v98

$$\sqrt{98} = \sqrt{49 \cdot 2} = \sqrt{49} \cdot \sqrt{2}$$

$$7\sqrt{2}$$