

$$5x^2y^4 + 3xy^4$$

like

$$3x^2 + x^2$$
$$4x^2$$

$$(8x^2 + 5x + 4) + (6x^2 + 2x - 5)$$
$$14x^2 + 7x - 1$$

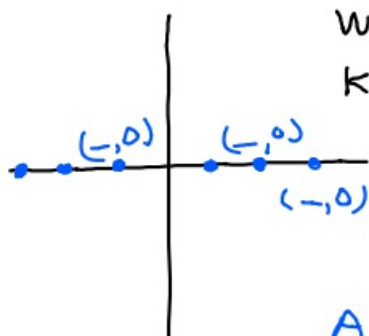
$$(2x^2 - 4) - (3x^2 - 5)$$
$$2x^2 - 4 - 3x^2 + 5$$
$$-x^2 + 1$$

$$2x^2y^4 + 5x^2y^4$$
$$7x^2y^4$$

$$(3x^2 + 2x - 1) - (5x^2 - 4x + 10)$$
$$-2x^2 - 2x + 9$$

$$2x^3y + 4xy^3 + 3xy^3 + 2x^3y$$
$$4x^3y + 7xy^3$$

1-31-20 1<sup>st</sup> Trig



What do you know must be true about the blue dots?  
y value is 0.  
All x-intercepts.

- ① What are the x-intercepts of  $y = 3x + 4$   
What do I know is true?

$$0 = 3x + 4$$

$$\frac{-4}{3} = \frac{3x}{3}$$

$$x = -1\frac{1}{3}$$



$$\left(-1\frac{1}{3}, 0\right)$$

- ② What are the x-intercepts of  $y = x^2 + 7x + 10$

$$0 = x^2 + 7x + 10$$

$$0 = (x+2)(x+5)$$

$$x+2=0$$

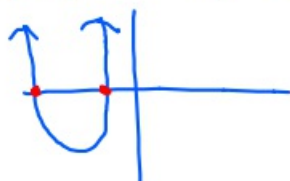
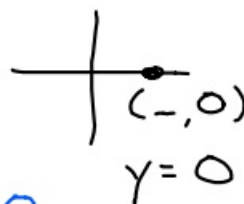
$$x=-2$$

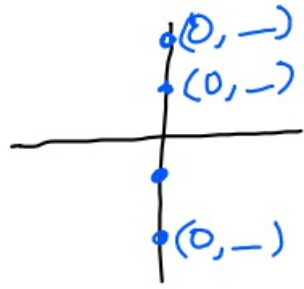
$$x+5=0$$

$$x=-5$$

$$(-2, 0)$$

$$(-5, 0)$$





What is true about these blue dots?

$$x=0$$

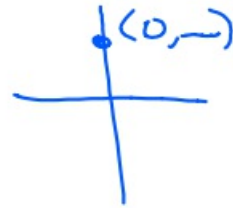
③ What is the y-intercept of

$$y = x^2 + 7x + 10$$

$$y = 0^2 + 7 \cdot 0 + 10$$

$$y = 10$$

$$(0, 10)$$



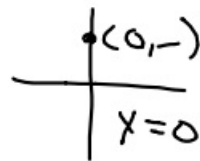
④ What is the y-intercept of

$$f(x) = x^3 + 3x^2 - 6x + 4$$

$$y = 0^3 + 3 \cdot 0^2 - 6 \cdot 0 + 4$$

$$y = 4$$

$$(0, 4)$$



⑤ Give the x and y-intercepts of  $y = x^2 + 3x + 2$

x-int.

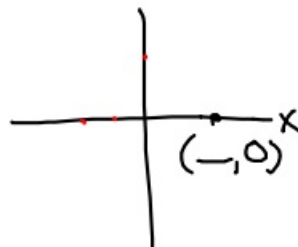
$$0 = x^2 + 3x + 2$$

$$0 = (x+2)(x+1)$$

$$x+2=0 \quad x+1=0$$

$$x=-2 \quad x=-1$$

$$(-2, 0) \quad (-1, 0)$$



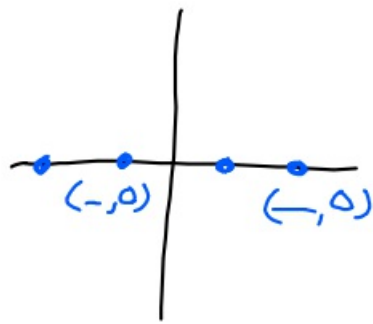
y-int.

$$y = 0^2 + 3 \cdot 0 + 2$$

$$y = 2$$

$$(0, 2)$$

1-31-20 3<sup>rd</sup> Trig

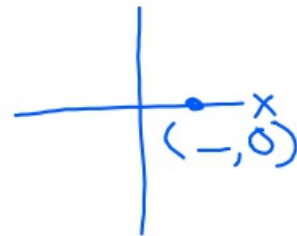


What is true  
about the  
blue dots?  
The y-value  
is 0.

x-intercepts

- ① What are the x-intercepts  
of  $y = 4x - 8$ .

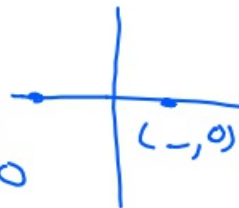
$$\begin{array}{r} 0 = 4x - 8 \\ +8 \quad \quad +8 \\ \hline 8 = 4x \\ x = 2 \end{array}$$



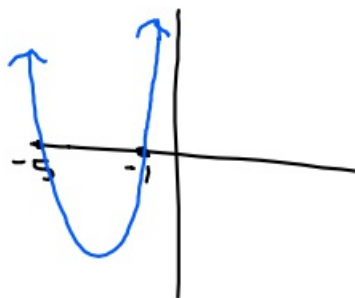
$(2, 0)$

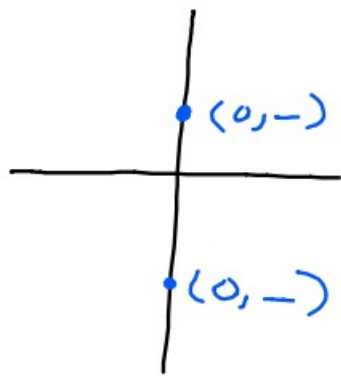
- ② What are the x-intercepts  
for  $f(x) = x^2 + 6x + 5$ ?

$$\begin{array}{l} 0 = x^2 + 6x + 5 \\ 0 = (x+5)(x+1) \\ x+5 = 0 \quad \quad x+1 = 0 \\ x = -5 \quad \quad \quad x = -1 \end{array}$$



$(-5, 0)$        $(-1, 0)$





What is true about these blue dots?

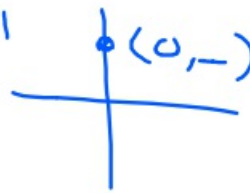
$$x=0$$

- ③ What is the y-intercept of  $f(x) = 3x^4 + 3x^3 - 6x^2 + x + 1$

$$y = 3 \cdot 0^4 + 3 \cdot 0^3 - 6 \cdot 0^2 + 0 + 1$$

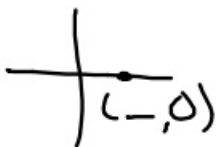
$$y = 1$$

$$(0, 1)$$



- ④ Find the x and y-intercepts of  $f(x) = x^2 + 6x + 8$ .

x-intercepts



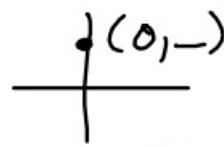
$$0 = x^2 + 6x + 8$$

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

$$x+2=0 \quad x+4=0$$

$$x=-2 \quad x=-4$$

$$(-2, 0) \quad (-4, 0)$$



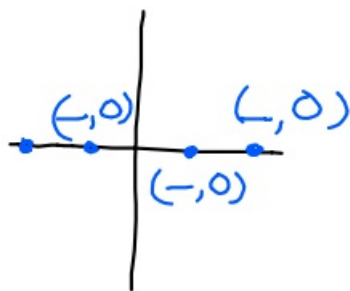
$$y = 0^2 + 6 \cdot 0 + 8$$

$$y = 8$$

$$(0, 8)$$

Okay  
baldman

1-31-20 4<sup>th</sup> Trig



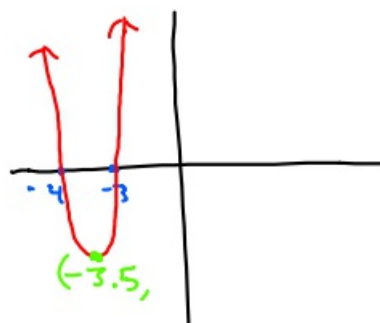
What is true about the blue dots?  
Every y value is 0.

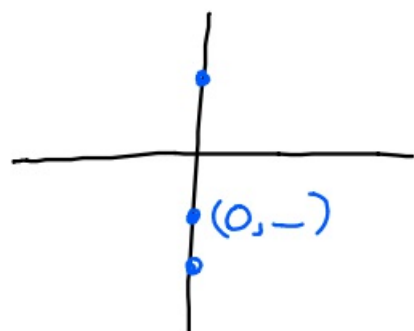
- ① What are the x-intercepts of  $y = 3x - 12$ ?

$$\begin{aligned} 0 &= 3x - 12 \\ +12 & \quad +12 \\ \hline 12 &= 3x \\ x &= 4 \\ (4, 0) & \end{aligned}$$

- ② What are the x-intercepts of  $y = x^2 + 7x + 12$ ?

$$\begin{aligned} 0 &= x^2 + 7x + 12 \\ 0 &= (x+4)(x+3) \\ x+4 &= 0 & x+3 &= 0 \\ x &= -4 & x &= -3 \\ (-4, 0) & & (-3, 0) & \end{aligned}$$





What is true about the blue dots?

$$x = 0$$

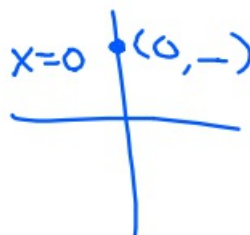
③ What is the y-intercept of

$$y = x^8 - 6x^3 + x + 5$$

$$y = 0^8 - 6 \cdot 0^3 + 0 + 5 \quad x=0 \quad (0, -)$$

$$y = 5$$

$$(0, 5)$$



④ Find the x and y-intercepts of  $y = x^2 + 4x + 3$

x-intercepts



$$0 = x^2 + 4x + 3$$

$$(x+3)(x+1) = 0$$

$$x+3=0 \quad x+1=0$$

$$x = -3 \quad x = -1$$

$$(-3, 0) \quad (-1, 0)$$

y-intercepts



$$y = 0^2 + 4 \cdot 0 + 3$$

$$y = 3$$

$$(0, 3)$$

