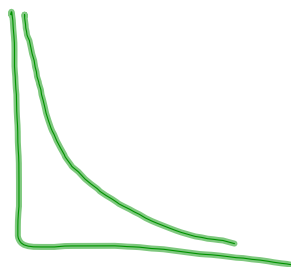


Inverse variation relationship

$$xy = k$$

x	y
1	500
2	250
3	
4	
5	100



$$xy = 500$$

exponential decay

After 1 hour 102.5 mg of
medicine remains. After 2 hours
84.05 mg

1.) decay factor $\frac{y_2}{y_1} \approx .82$

2.) decay rate 18% how far is factor from one?

3.) equation $y = 125(0.82)^x$

y-int d.f.

$$W = -\frac{4}{5}(2h - 5)^2$$

$$W = -96h^2 + 225$$

pumping water from a pool?
w = gallons of water
h = hours

- 1.) How much water is in pool to start?
- 2.) How much water is being pumped out each hour?
- 3.) How long will it take to empty the pool?

laws of exponents

$$\frac{35x^2y^{-3}}{(5xy^2)^3} = \frac{35x^2}{y^3 \cdot 125x^3y^6}$$
$$= \frac{35x^2}{125x^3y^9} = \frac{7}{25xy^9}$$

laws of exponents

$$\frac{(2a^3b^2)^2}{-8a^{-3}b^2} = \frac{4a^6b^4}{-8a^{-3}b^2}$$

$$\rightarrow \frac{1a^9b^2}{-2} = -\frac{1a^9b^2}{2} = \frac{-a^9b^2}{2}$$

$$\frac{(2a^3b^2)^2}{-8a^{-3}b^2} \Rightarrow \frac{2aabb2aabb}{-8a^{-3}bb}$$

$$\frac{4}{-8} = \frac{1}{-2}$$

$$= \frac{2aabb2aabb}{-8bb}$$

$$= \frac{1a^9b^2}{-2}$$

Solve

quadratic equation

$$2x^2 + 11x = -12$$

$$2x^2 + 11x + 12 = 0$$

$$(2x+3)(x+4) = 0$$

$$2x+3=0$$

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

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

or

$$x+4=0$$

$$x = -4$$

more quadratics

$$h = -16t^2 + 48t$$

$$h = 16t(-t+3)$$

(0,0) & (3,0)
max height
(1.5, 36) 36 feet

how long is ball in
air?

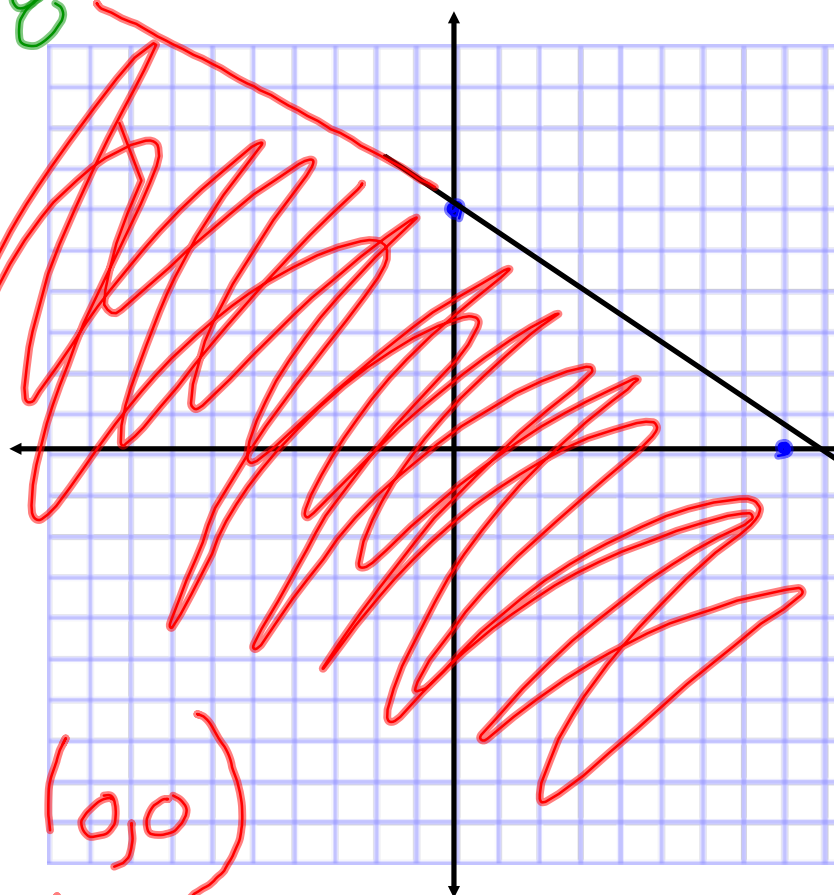
3 seconds

$$2x + 3y \leq 18$$

1st graph

$$2x + 3y = 18$$

x	0	9
y	6	0

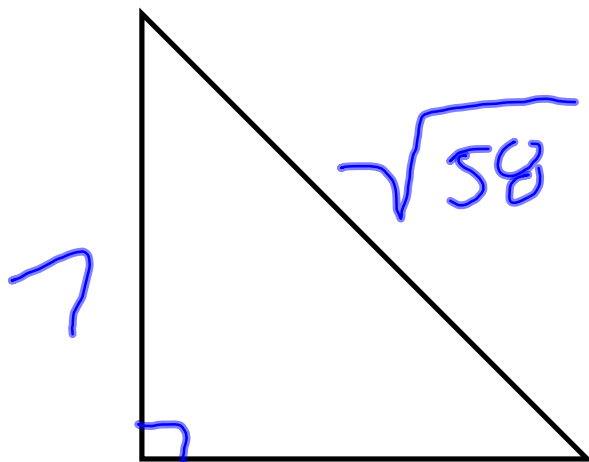


2nd test (0,0)

$$2(0) + 3(0) \leq 18$$

$$0 \leq 18$$

y/ps



$$x = 3$$

$$a^2 + b^2 = c^2$$
$$(7)^2 + b^2 = (\sqrt{58})^2$$

$$b^2 = 58 - 49$$

$$b^2 = 9$$

$$b = 3$$

Find equation of line
through $(5, 2)$ & $(3, 0)$

$$\text{ST } \frac{\Delta y}{\Delta x} = \frac{2-0}{5-3} = \frac{2}{2} = 1 \quad m=1$$

and

$$y = mx + b$$

$$(2) = (1)(5) + b$$

$$2 = 5 + b$$

$$\begin{array}{r} -5 \quad -5 \\ \hline \end{array}$$

$$-3 = b$$

$$y = x - 3$$

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

1.) x -int?

2.) y -int

3.) L.O.S.

4.) Vertex?

5.) up or down

