MAY 27 POINT SLOPE FORM

$x_1\ y_1$ $x_2\ y_2$

46. $(1,4)$ $(3,10)$

Find slope

$$M = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{10-4}{3-1} = \frac{6}{2} = \frac{3}{1}$$

Find equation

$$\frac{3}{1} = \frac{(x-1)}{(x-1)} \quad \frac{y-4}{x-1}$$

$$3(x-1) = y-4$$

$$y-4 = 3(x-1)$$

$$y-4 = 3x-3$$

$$-y+4 \quad -y+4$$

$$0 = 3x - y + 1$$

is the standard equation

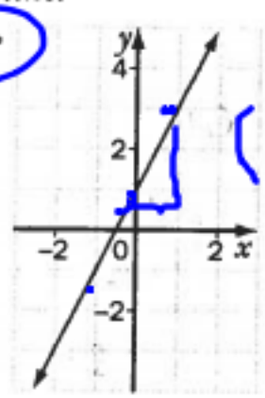
$$y - 4 \overset{+4}{=} 3x - 3 \overset{+4}{}$$

$$y = 3x + 1$$

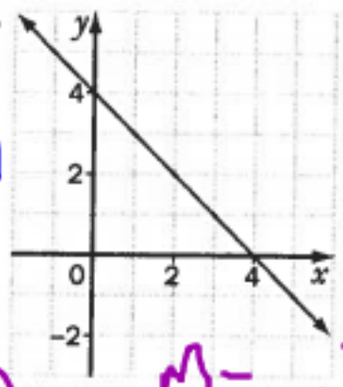
x	y
2	7
4	13

Given the graph of a line, determine an equation of the line.

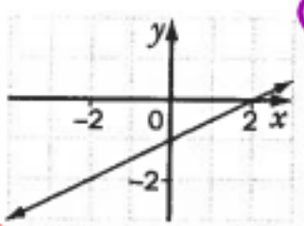
50.



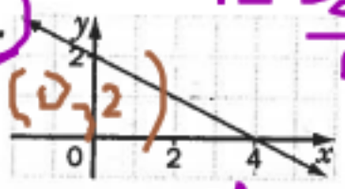
51.



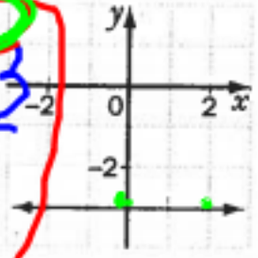
52.



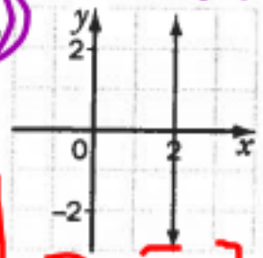
53.



54.



55.



b) Using a for altitude and t for time, find an equation of the line.

c) Use the equation to find the time for which the plane can fly at 20 000 m; at 26 000 m.

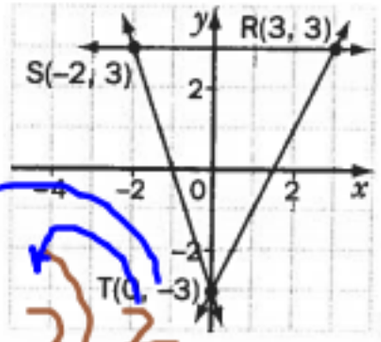
59. Find an equation of the line through $(a, 0)$ and $(0, b)$.

60. What do x_1 and y_1 represent in the point-slope form of an equation?

61. Compare and contrast the graphs of $x = 5$ and $y = 5$.

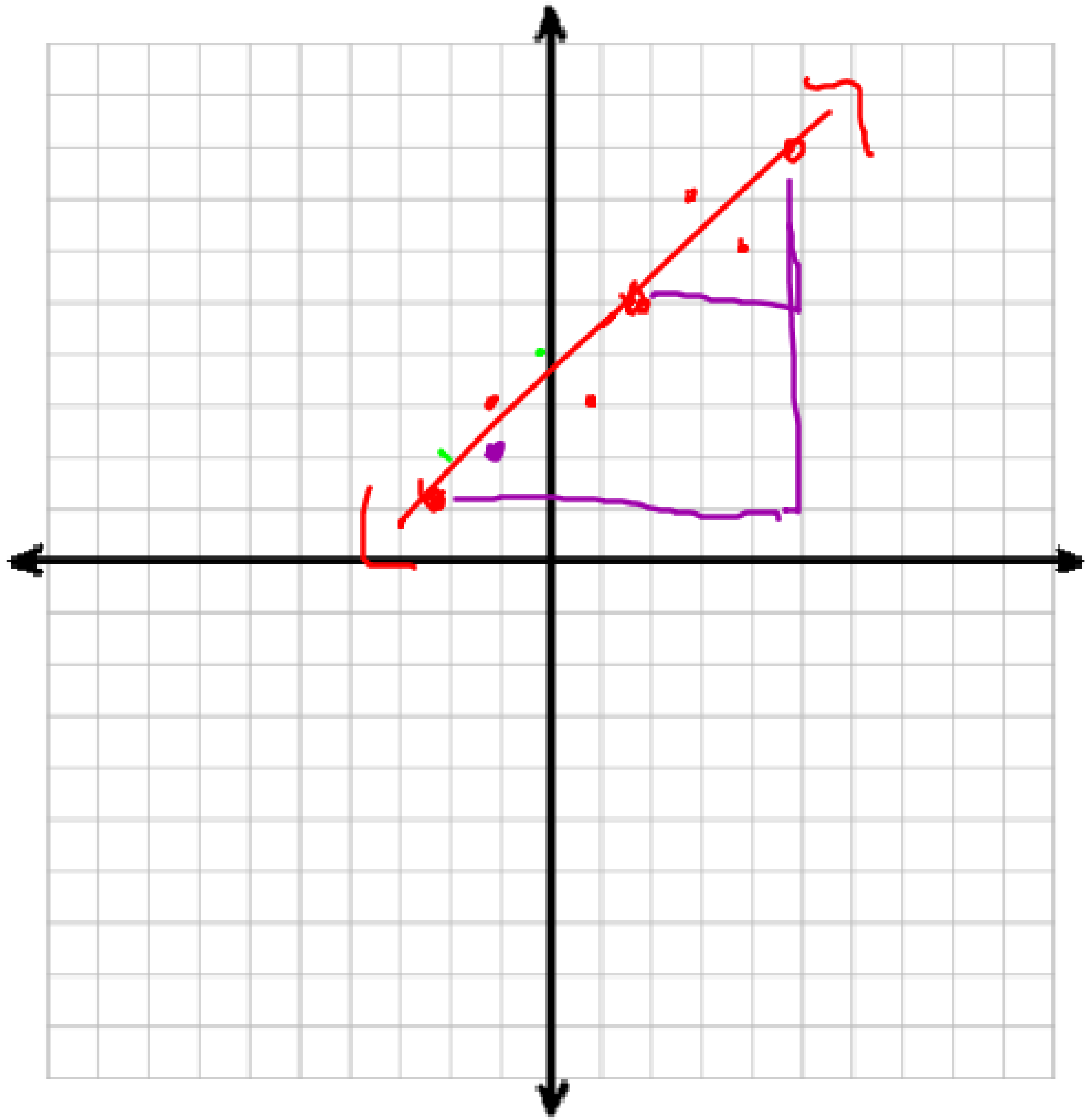
62. Show that the point (7, 3) is on the line through the points (3, 4) and (−5, 6).

63. Geometry The three lines shown on the grid intersect to form triangle RST. Write the equation for each line in standard form.



Line of best fit

56 a.



$\frac{Rise}{Run}$ $\frac{3}{3}$ = $\frac{6}{7}$

bad line!!

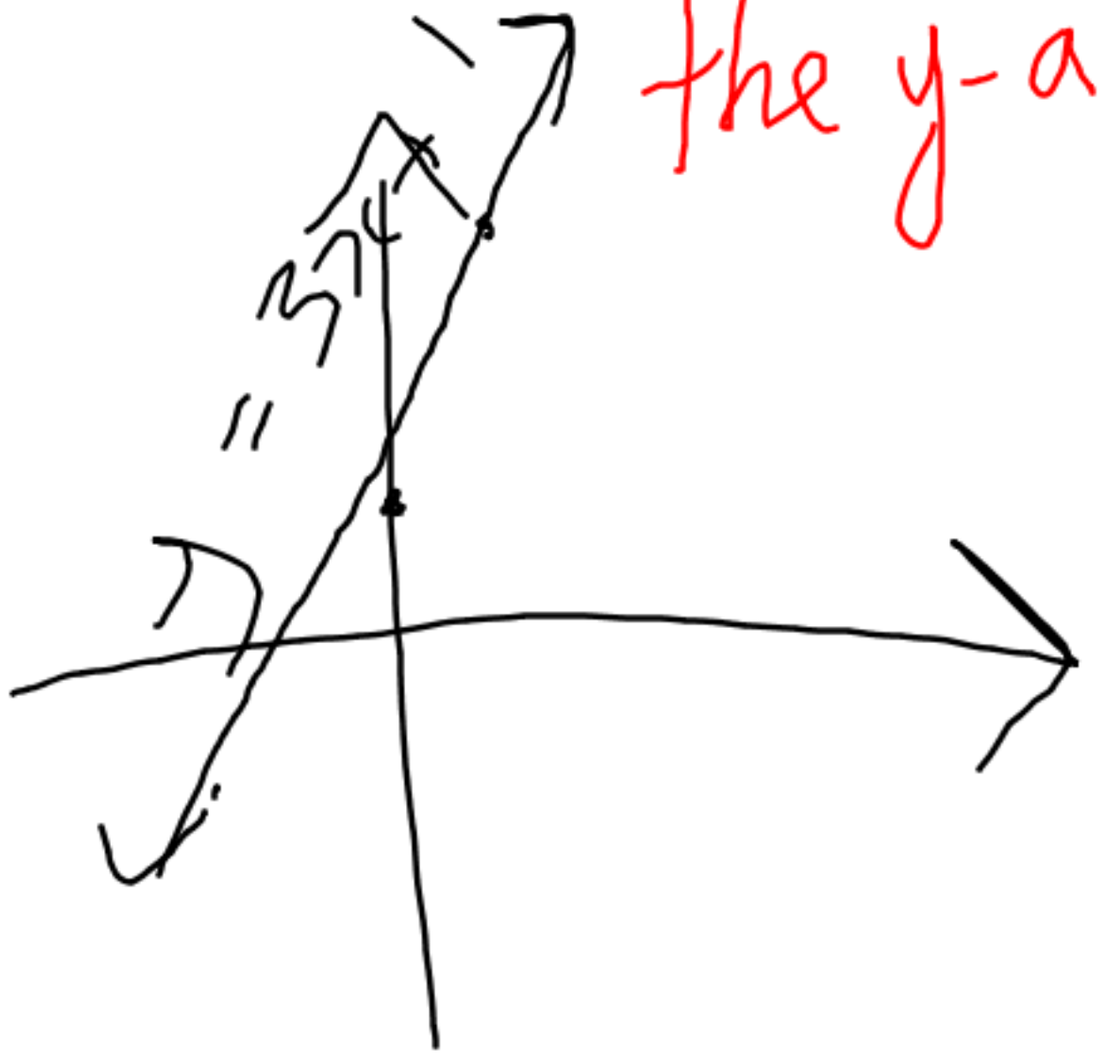
p428 Slope and y-intercept

$$y = mx + b$$ - where the lines crosses the y-axis

1. $y = 3x + 1$

$m = 3$

$b = 1$



3) $y = -4x + 3$

$m = -4$ $\quad b = 3$

---

6) $y + 4 = 5x$ $\quad -4$

$y = 5x - 4$

$m = 5$ $\quad b = -4$

7) $y-2x=0$

$+2x \quad +2x$

$y=2x+0$

$m=2 \quad b=0$

9 $4x + 2y = 3$

$-4x \qquad\qquad -4x$

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

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

$m = -2 \qquad b = +\frac{3}{2}$

(11) $3x+2y+6=0$

$-2y \quad -2y$

$\frac{3x}{-2}+\frac{6}{-2}=\frac{-2y}{-2}$

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

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

$b=-3$

HOMEWORK

→ finish box 3

→ box 4 upto q10