

**1.4 Homework: Functions**

1. In the following two problems, solve for the value of  $x$ .

(a)  $x - 5 = 12$

(b)  $13 - x = -3$

2. Given the linear function  $f(x) = 3x + 4$ .

(a) Find  $f(0)$

(b)  $f(x) = 10$ . Find  $x$ .

3. Given  $g(x) = x^2 - 5x + 15$ . Simplify  $g(0)$ .

4. Given  $f(x) = 3x - 2$ . Solve for  $x$  such that for  $f(x) = 13$ .

5. A line is shown on the grid below.

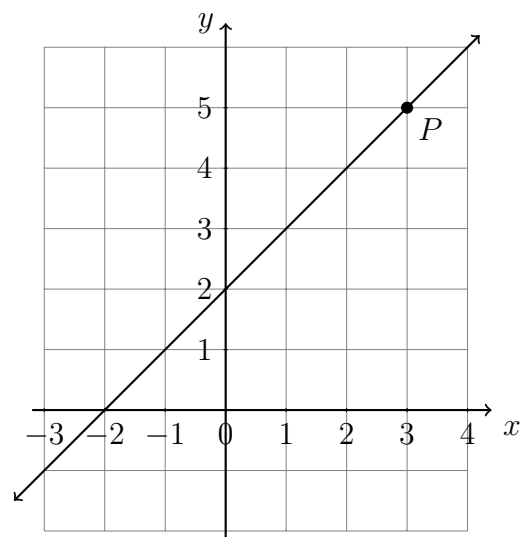
(a) Write down it's slope.

$m =$

(b) Write down it's  $y$ -intercept.

$b =$

(c) Write down the equation of the line.



(d) State the coordinates of the point  $P$ .

6. The line  $l$  has the equation  $y = \frac{3}{2}x - 1$ .

(a) Write down its slope.  $m =$

(b) Write down its  $y$ -intercept.  $b =$

(c) Is the point  $(4, 4)$  on the line  $l$ ? Justify your answer.

7. Draw a straight line through the points  $A$  and  $B$  shown on the grid below.

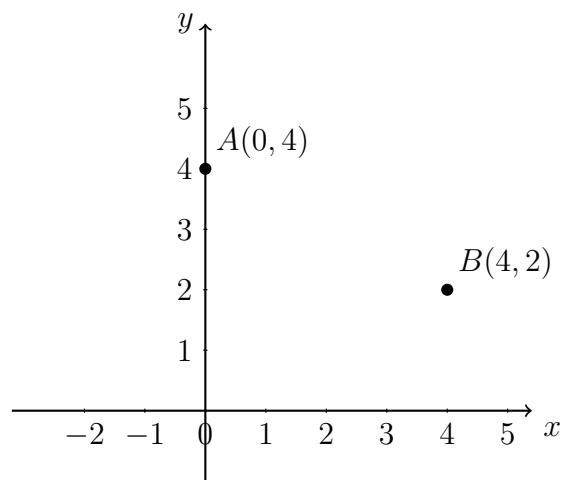
(a) Write down the line's  $y$ -intercept.

$b =$

(b) Write down the slope of the line.

$m =$

(c) Write down the equation of the line.



8. Early finishers: Simplify each expression. (Leave it in radical form if necessary, not a decimal.)

(a)  $\sqrt{25}$

(b)  $\sqrt{24}$