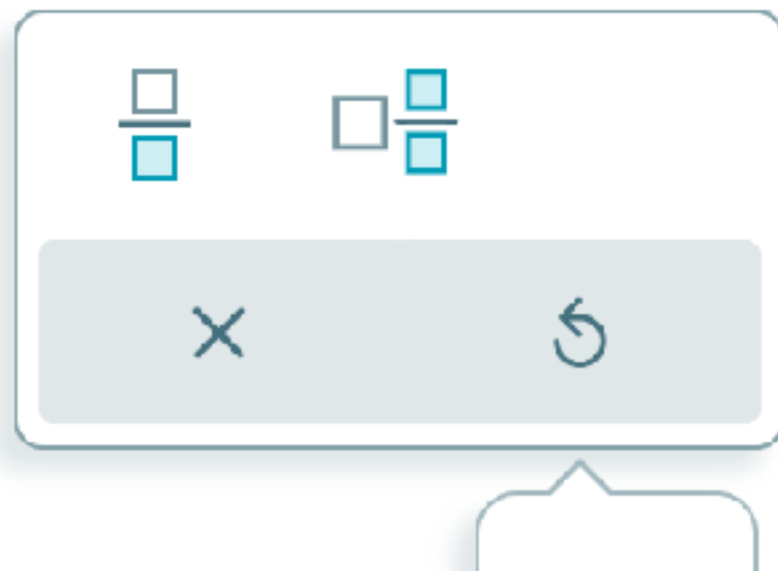


Find the y -intercept and x -intercept of the line.

$$5x + 6y = -7$$

y -intercept:

x -intercept:



y -int. $(0, -7/6)$

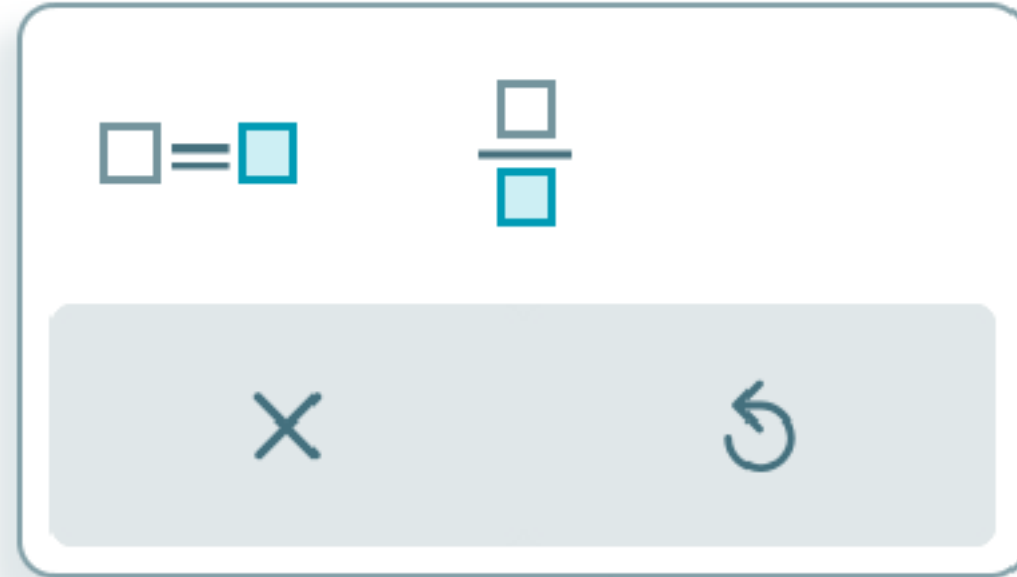
$$6y = -7$$

$$y = -7/6$$

x int $(-7/5, 0)$

$$5x = -7 \quad x = -7/5$$

Find an equation for the line that passes through the points $(5, -6)$ and $(-5, -1)$.



$$y + 6 = \frac{-1}{2}(x - 5)$$

$$y - y_1 = m(x - x_1)$$

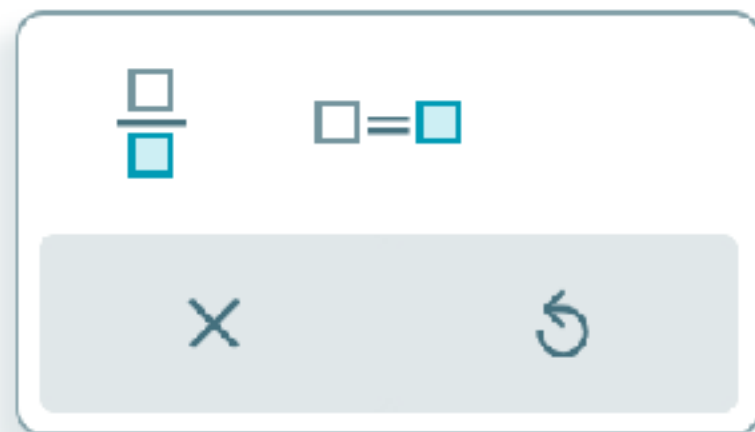
$$\begin{aligned} m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{-1 - (-6)}{-5 - (5)} = \frac{5}{-10} \\ &= -\frac{1}{2} \end{aligned}$$

Ashley is a software saleswoman. Her base salary is \$2500, and she makes an additional \$120 for every copy of *Math is Fun* she sells.

Let P represent her total pay (in dollars), and let N represent the number of copies of *Math is Fun* she sells. Write an equation relating P to N . Then use this equation to find her total pay if she sells 29 copies of *Math is Fun*.

Equation:

Total pay if Ashley sells 29 copies: \$



$$m = 120$$

$$b = 2500$$

$$y = P$$

$$x = N$$

$$P = 120N + 2500$$

(29)

A cookie company uses one cup of sugar for every 25 cookies it makes.

Let S represent the total number of cups of sugar used, and let N represent the total number of cookies made. Write an equation using the axes below.

$x = N$
 $y = S$

Equation:

=

×

$S = \frac{1}{25}N$

The equations of three lines are given below.

Line 1: $4x + 6y = -6$

Line 2: $y = -\frac{2}{3}x - 5$

Line 3: $\frac{3y = -2x + 7}{3}$

1) $-\frac{2}{3}$ 2) $-\frac{2}{3}$ 3) $-\frac{2}{3}$

$4x + 6y = -6$
 $6y = -\frac{4x}{6}$

	Right triangle	Not a right triangle	Cannot be determined
(a) $P(-7, 2), Q(-3, 10), R(0, -2)$	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
(b) $T(4, 0), R(-1, 6), I(-4, -5)$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) $D(6, 4), E(9, 10), F(-2, 8)$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

a) $PQ = \frac{-8}{-4} = 2$
 $PR = \frac{-4}{7}$
 $QR = \frac{2}{-3} = -\frac{2}{3}$

3 5 2 8

17 6 4
2

8 8 2
4 4 1 2

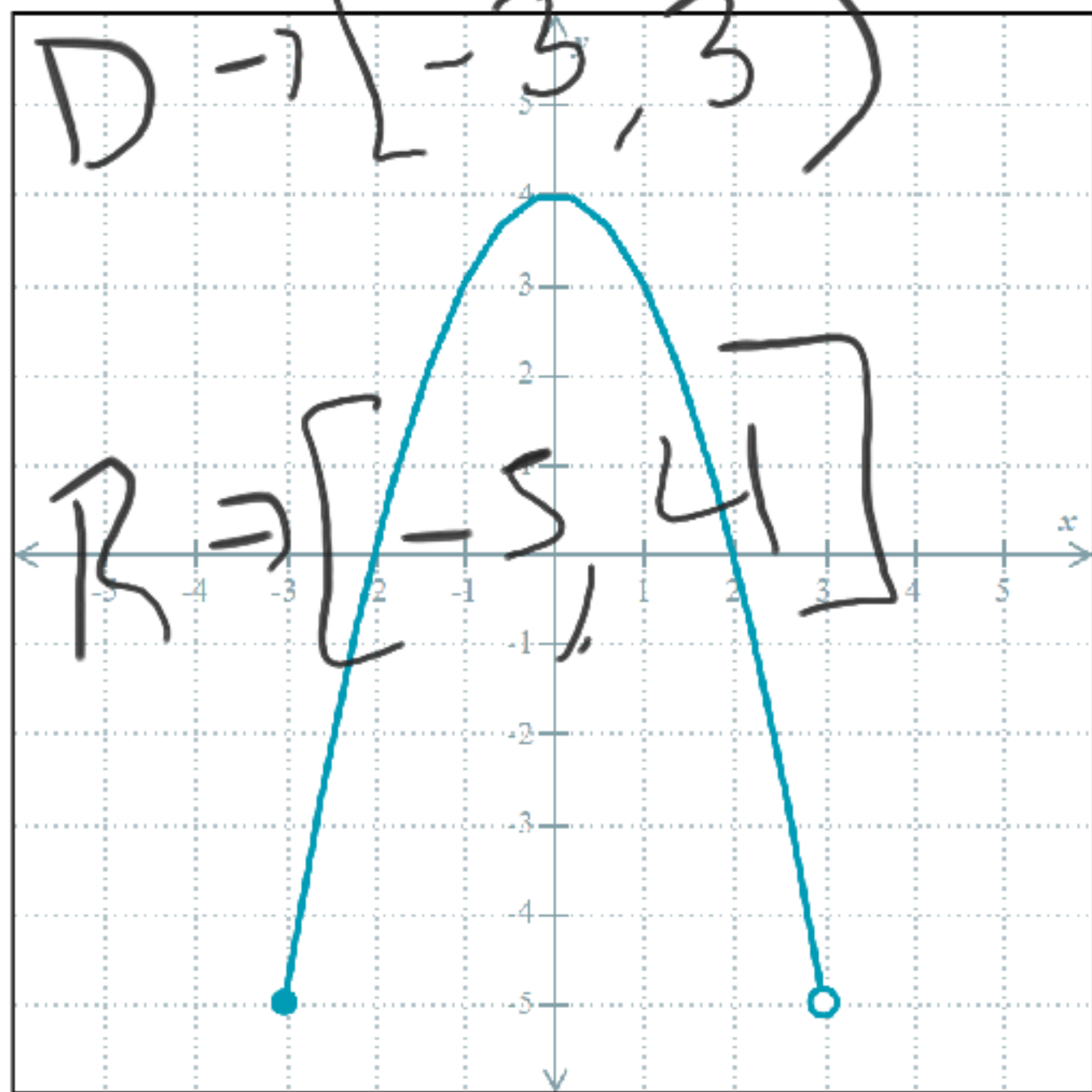
4 4 1
14 1 7 3
4 9
7 7

2 · 3 · 7 √ 2

$\boxed{42\sqrt{2}}$

The entire graph of the function h is shown in the figure below.

Write the domain and range of h using interval notation.



Domain \rightarrow Inputs
(x)

Range \rightarrow outputs
(y)

$($ \rightarrow not included \circ
 $[$ \rightarrow included \bullet

(a) domain =

(b) range =

\emptyset

$$f(x) = \frac{x+1}{x^2-1}$$

1) No Divide by zero

2) even root ≥ 0

3) Real life restrictions

$$x^2 - 1 \neq 0$$

$$\sqrt{x^2} \neq \sqrt{1}$$

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

$$x \neq \pm 1$$

$$x \neq -1 \quad x \neq 1$$

$$(-\infty, -1) \cup (-1, 1) \cup (1, \infty)$$

$$4x + 3b = 0$$

$$4x = -3b$$

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

$$[-9, 8)$$

$$\sqrt{25 - 5x}$$

$$25 - 5x \geq 0$$

$$-5x \geq -25$$

$$x \leq 5$$

$$(-\infty, 5]$$