

## Section 3.2: cont'd

Wednesday, October 16, 2013

9:29 AM

Assign 2:

$$3b) \quad xa \left( \frac{2}{x} - \frac{1}{a} \right) = (1) xa$$

$$\text{LCD: } xa$$

$$2a - x = xa$$

$$2a - xa = x$$

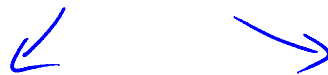
$$a(2 - x) = x$$

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

$$\text{or } \frac{-x}{x-2}$$

$$5a) \quad |2x-1| - 3 = 0$$

$$|2x-1| = 3$$



$$2x - 1 = 3$$

$$2x = 4$$

$$x = 2$$

$$\text{or } 2x - 1 = -3$$

$$2x = -2$$

$$x = -1$$

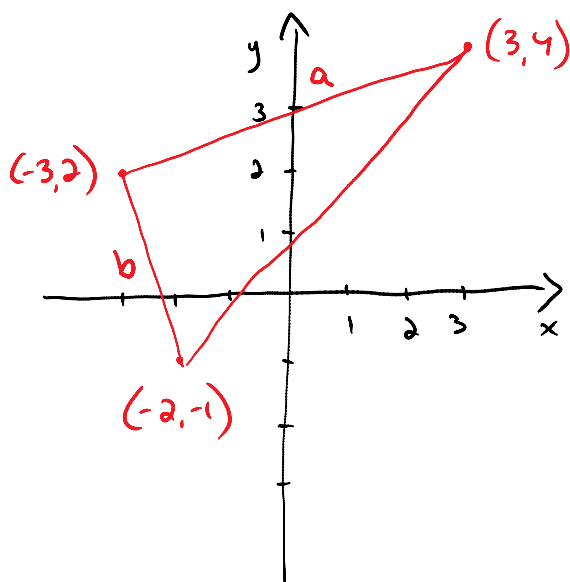
$$\{-1, 2\}$$

Find the slope of a line which is perpendicular to the line running through the points  $(2, 5)$  <sup>①</sup> and  $(-3, 7)$  <sup>②</sup>.

$$\begin{aligned}
 m_1 &= \frac{y_2 - y_1}{x_2 - x_1} \\
 &= \frac{7 - 5}{-3 - 2} \\
 &= \frac{2}{-5} = -\frac{2}{5}
 \end{aligned}$$

$$m_2 = -\frac{1}{m_1} = \frac{5}{2}$$

Is the triangle with vertices  $(3, 4)$ ,  $(-3, 2)$ , and  $(-2, -1)$  a right triangle?



$$\begin{aligned}
 m_a &= \frac{y_2 - y_1}{x_2 - x_1} \\
 &= \frac{4 - 2}{3 - (-3)} = \frac{2}{6} = \frac{1}{3}
 \end{aligned}$$

$$m_b = \frac{y_2 - y_1}{x_2 - x_1}$$

perpendicular

$$m_b = \frac{y_2 - y_1}{x_2 - x_1} \quad \text{perpendicular} \downarrow$$
$$= \frac{2 - (-1)}{-3 - (-2)} = \frac{3}{-1} = -3$$

YES,