

August 30, 2017  $\sqrt{-1} = i$

$$\sqrt{-4} \cdot \sqrt{-9} \neq \sqrt{(-4) \cdot (-9)}$$

$$\sqrt{(-1) \cdot 4} \cdot \sqrt{(-1) \cdot 9} \quad \sqrt{36}$$

$$\sqrt{-1} \cdot \sqrt{4} \cdot \sqrt{-1} \cdot \sqrt{9}$$

$$i \cdot 2 \cdot i \cdot 3$$

$$i \cdot i \cdot 2 \cdot 3$$

$$i^2 \cdot 6$$

$$(-1) \cdot 6$$

-6

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p. 8 #27) LCD:  $\frac{3}{1}$

$$\frac{3}{1} \left( \frac{x}{3} - 1 = \frac{5}{3}x + 7 \right)$$

$\frac{5}{3}x = \frac{5}{3} \cdot \frac{x}{1}$

$$x - 3 = 5x + 21$$

$-x - 3 = 5x + 21$	$-x - 21 = 5x + 21$
$-6 = 4x$	$-24 = 4x$
$-6 = x$	$-6 = x$

check

$$\frac{-6}{3} - 1 = \frac{5}{3}(-6) + 7$$

$$-2 - 1 = \frac{-30}{3} + 7$$

$$-3 = -10 + 7$$

$$-3 = -3 \checkmark$$

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Sub

$$\begin{cases} 2x - 3y = 2 & (-\frac{7}{17}, -\frac{16}{17}) \\ 5x + y = -3 \end{cases}$$

$$y = -5x - 3$$

$$2x - 3(-5x - 3) = 2$$

$$2x + 15x + 9 = 2$$

$$17x + 9 = 2$$

$$17x = -7$$

$$x = -\frac{7}{17}$$

$$5(-\frac{7}{17}) + y = -3$$

$$\frac{-35}{17} + y = -3$$

$$y = -\frac{3}{1} + \frac{35}{17}$$

$$= \frac{-51 + 35}{17}$$

$$y = -\frac{16}{17}$$

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Elim.

$$\begin{cases} 2x - 3y = 2 \\ 3(5x + y = -3) \end{cases}$$

$$\begin{cases} 2x - 3y = 2 \\ 15x + 3y = -9 \end{cases}$$


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$$\frac{17x}{17} \quad 0 = \frac{-7}{17}$$

$$x = -\frac{7}{17}$$

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$$\begin{cases} 3(2x + 4y = 1) \\ -2(3x + 2y = -1) \end{cases}$$

$$\begin{cases} 6x + 12y = 3 \\ -6x - 4y = 2 \end{cases}$$


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$$8y = 5$$

$$y = \frac{5}{8}$$

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