

§2.1 #63 (fn #63)

$$a(b+c) = ab+ac$$

Yes! $= abc+ad$	$a(bc+d) = abac+d$	↪ No!
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$$4+4 = 16$$

Write much.
Think little.

$$\frac{1}{3}(y+4) + 6 = \frac{1}{4}(3y-1) - 2$$

$$\text{LCD} = 12$$

$$12 \left[\frac{1}{3}(y+4) + 6 \right] = 12 \left[\frac{1}{4}(3y-1) - 2 \right]$$

$$\cancel{12} \left(\frac{1}{\cancel{3}} \right) (y+4) + 12(6) = \cancel{12} \left(\frac{1}{\cancel{4}} \right) (3y-1) + 12(-2)$$

$$4(y+4) + 72 = 3(3y-1) - 24$$

$$4y + 16 + 72 = 9y - 3 - 24$$

$$\begin{array}{r} 4y + 88 = 9y - 27 \\ -88 = -88 \\ \hline \end{array}$$

$$4y = 9y - 115$$

$$\begin{array}{r} -9y = -9y \\ \hline \end{array}$$

$$-5y = -115$$

$$\frac{-5y}{-5} = \frac{-115}{-5}$$

$$y = \frac{-115}{-5}$$

$$y = 23$$

$$y \in \{23\}$$

$$\textcircled{63} \quad \frac{1}{3}(y+4) + 6 = \frac{1}{4}(3y-1) - 2$$

$$\frac{1}{3}y + \frac{1}{3}(4) + 6 = \frac{1}{4}(3y) + \frac{1}{4}(-1) - 2$$

LCD, etc.

$$\textcircled{65} \quad 2[7 - 5(1-n)] + 8n = -16 + 3[6(n+1) - 3n]$$

one way: $14 - 10(1-n) + 8n = -16 + 18(n+1) - 9n$

$$14 - 10 + 10n + 8n = -16 + 18n + 18 - 9n$$

$$\textcircled{65} \quad 2[7 - 5(1-n)] + 8n = -16 + 3[6(n+1) - 3n]$$

$$2[7 - 5 + 5n] + 8n = -16 + 3[6n + 6 - 3n]$$

$$14 - 10 + 10n + 8n = -16 + 18n + 18 - 9n$$

S2.1 Hand in #s 11, 21, 27, 41, 64

$$\textcircled{20} \quad \frac{2+h}{9} + \frac{h-1}{3} = \frac{1}{3} *$$

$$\text{LCD} = 9 *$$
$$9 \left[\frac{2+h}{9} + \frac{h-1}{3} \right] = 9 \left[\frac{1}{3} \right]$$

$$\cancel{9} \left(\frac{2+h}{\cancel{9}} \right) + \cancel{3} \left(\frac{h-1}{\cancel{3}} \right) = 3$$

$$2+h + 3(h-1) = 3$$

$$2+h + 3h - 3 = 3$$

$$4h - 1 = 3$$

$$4h = 4$$

$$h = \frac{4}{4} = 1 = h$$

$$9 \left(\frac{1}{3} \right) =$$
$$\frac{9}{1} \cdot \frac{1}{3} = \frac{9 \cdot 1}{1 \cdot 3}$$
$$= \frac{9}{3} = 3$$

• Easy to miss this 3, here.