

August 28, 2015

Quiz #2

#1) $\frac{3(y+5)}{2} - 2y = -4(y-1) + 3y$

2) $\left(\frac{3y+15}{2} - 2y = -4y+4 + 3y \right)$

$$3y+15-4y = -8y+8+6y$$

$$-y+15 = -2y+8$$

$$\begin{array}{r} -y+15 \\ +2y-15 \\ \hline y = -7 \end{array}$$

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$$\frac{2}{1} \cdot \frac{(3y+15)}{2} = 3y+15$$

$$\frac{6y+30}{2}$$

$$\frac{6y}{2} + \frac{30}{2}$$

$$\boxed{3y+15}$$

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#2) $\frac{30}{1} \left(\frac{5x}{2} + \frac{6}{1} = \frac{3}{1} - \frac{x}{2} \right)$

$$75x+180 = 18 - 10x$$

$$\begin{array}{r} 75x+180 \\ +10x-180 \\ \hline 85x = -162 \end{array}$$

$$\frac{85x}{85} = \frac{-162}{85}$$

$$x = -\frac{162}{85}$$

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$$\frac{15}{1} \cdot \frac{5x}{2} = \frac{150x}{2} = 75x$$

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#3) $\frac{(3x^4)^3}{9x^5} = \frac{3^3 \cdot (x^4)^3}{9x^5}$

$$= \frac{27x^{12}}{9x^5}$$

12-5=7

$$= \boxed{3x^7}$$

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#1) $y^3 - 27$

$a = y$
 $b = 3$

$$(y-3)(y^2+3y+9)$$

$$a^3 \pm b^3 = (a \pm b)(a^2 \mp ab + b^2)$$

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