

Solve:

$$2(2x + 3) - 3(4x - 5) = 22$$

$$53 = 3(\widehat{y - 2}) - 2(\widehat{3y - 1})$$

$$53 = 3y - 6 - 6y + 2$$

$$\begin{array}{r} 53 = -3y - 4 \\ +4 \end{array}$$

$$\frac{57}{-3} = \frac{-3y}{-3}$$

$$y = -19$$

Solve for Variables

$$S = \pi r l + \pi r^2 \quad \text{solve for } l$$

$$S - \pi r^2 = \frac{\pi r l}{\pi r}$$

$$\frac{S - \pi r^2}{\pi r} = l$$

$$2 \cdot A = \frac{(b_1 + b_2)h}{2} \quad \text{solve for } h \quad \frac{2A}{(b_1 + b_2)} = \frac{(b_1 + b_2)h}{(b_1 + b_2)}$$

$$\frac{2A}{(b_1 + b_2)} = h$$

If $3n - 8 = 5$ What is the value of $3n - 3$

$$3n = 13$$

$$n = \frac{13}{3}$$

$$\begin{aligned} & 3\left(\frac{13}{3}\right) - 3 \\ & 13 - 3 = 10 \end{aligned}$$

If $4x + 5 = 29$ What is the value of $4x - 2$

$$\begin{array}{r} -5 \\ -5 \end{array}$$

$$\begin{array}{r} 4x = 24 \\ \frac{4}{4} \quad \frac{24}{4} \\ x = 6 \end{array}$$

$$4(6) - 2 = 22$$

$$24 - 2 = 22$$

Fraction Busting

1. Find the common denominator
2. Multiply each term by the common denominator
3. Solve
4. You just fraction busted!!!!

$$\frac{1}{3} + \frac{2}{5}$$

$$\begin{aligned} \text{Ex. } \frac{1}{3}x + \frac{2}{6} &= 4 \cdot 6 \\ 2x + 2 &= 24 \\ \frac{2x}{2} &= \frac{22}{2} \\ x &= 11 \end{aligned}$$

$$\frac{3}{5} + \frac{1}{15} =$$

$$\begin{aligned} \frac{3}{5} \cdot \frac{3}{3} + \frac{1}{15} \cdot \frac{1}{1} &= \frac{14}{15} \cdot \frac{1}{1} \\ \frac{9}{15}x + \frac{1}{15}x &= \frac{14}{15} \\ 9x + 1x &= 14 \\ \frac{10}{10}x &= \frac{14}{10} \\ x &= \frac{7}{5} \end{aligned}$$

Solve

$$\frac{2}{3}x + \frac{4}{5}x = \frac{3}{5}$$

$$10x + 12x = 9$$

$$\frac{22x}{22} = \frac{9}{22}$$

$$x = \frac{9}{22}$$

$$\frac{2}{7}(2x-5) = \frac{1}{2}x + 3 \cdot 14$$

$$4(2x-5) = 7x + 42$$

$$8x - 20 = 7x + 42$$

$$-7x$$

$$x - 20 = 42$$

$$x = 62$$

$$\frac{1}{5}x$$

$$\frac{1}{4}(x+6) = \frac{2}{5}(3x-1)$$

$$5(x+6) = 8(3x-1)$$

$$5x + 30 = 24x - 8$$

$$-5x + 38 = -24x$$

$$\frac{38}{19} = \frac{19x}{19}$$

$$2 = x$$