

5 steps1.a.) • d = Daniel's age

$$\bullet \text{ Daniel's age} + 24 = 38$$

(Scott's age)

$$\bullet d + 24 = 38$$

$$\bullet \begin{array}{r} d + 24 = 38 \\ -24 \quad -24 \\ \hline \end{array}$$

$$d = 14$$

define variable

verbal model

equation

solve

answer

• $d = 14$ years old or Daniel is 14 years old.b.) • w = length of other piece of wood

$$\bullet 4\frac{1}{3} + w = 12$$

$$\bullet 4\frac{1}{3} + \text{length of other piece} = 12 \text{ feet total}$$

$$\bullet \begin{array}{r} 4\frac{1}{3} + w = 12 \\ -4\frac{1}{3} \quad 4\frac{1}{3} \\ \hline \end{array}$$

Sidework: like denominator

$$\begin{array}{r} 12\frac{3}{3} \\ -4\frac{1}{3} \\ \hline 7\frac{2}{3} \end{array}$$

$$w = 7\frac{1}{3} \text{ ft}$$

• The second piece of wood is $7\frac{1}{3}$ feet long.C. • b = average number of strike-out batters

$$\bullet \frac{240}{25} = \text{average \# of batters struck-out per game}$$

$$\bullet \frac{240}{25} = b$$

$$\begin{array}{r} \text{Side work} \\ 25 \overline{) 240.0} \\ \underline{-225} \downarrow \\ 150 \\ \underline{-150} \\ 0 \end{array}$$

• $b = 9.6$ strike-outs per game

Unit 3 Quiz #2 Procedural

p.2

1d.) S = students in total who took test

$$\frac{2}{5} \cdot \text{total students} = 300$$

$$\frac{2}{5} S = 300$$

* divi

$$\boxed{750 \text{ total students}}$$

$$\text{Solving } \frac{2}{5} \cdot \frac{5}{2} \cdot S = \frac{300 \cdot 5}{1 \cdot 2}$$

$$S = \frac{1500}{2}$$

$$S = 750$$

$$\begin{array}{r} 2a.) \quad 5 + x = 29 \\ \underline{-5} \quad \underline{-5} \\ x = 24 \end{array}$$

$$\begin{array}{r} b.) \quad y - 5 = 7 \\ \underline{+5} \quad \underline{+5} \\ y = 12 \end{array}$$

$$\begin{array}{r} c.) \quad x - 47 = 17 \\ \underline{+47} \quad \underline{+47} \\ x = 64 \end{array}$$

$$\begin{array}{r} d.) \quad 35y = 280 \\ \underline{35} \quad \underline{35} \\ y = 8 \end{array}$$

$$\begin{array}{r} e.) \quad 0.5x = 29.5 \\ \underline{0.5} \quad \underline{0.5} \\ x = 59 \end{array}$$

$$\begin{array}{r} 59 \\ 0.5 \overline{) 29.5} \\ \underline{-25} \\ 45 \end{array}$$

$$\begin{array}{r} f.) \quad \frac{3}{4} + y = \frac{9}{10} \cdot 2 \rightarrow \frac{18}{20} \\ \underline{-\frac{3}{4}} \quad \underline{-\frac{3 \cdot 5}{4 \cdot 5}} \rightarrow \frac{15}{20} \\ y = \frac{3}{20} \end{array}$$

$$2g.) \quad \frac{8}{27}x = \frac{16}{9} \div \frac{8}{27} \quad \text{or} \quad \frac{\frac{8}{27}}{\frac{8}{27}}x = \frac{\frac{16}{9}}{\frac{8}{27}}$$

$\Downarrow$

$$\frac{8}{27} \cdot \frac{27}{8}x = \frac{16}{9} \cdot \frac{27^3}{8} = \frac{2}{1} \cdot \frac{3}{1}$$

$x = 6$

$$h.) \quad \frac{y}{5} = 27 \cdot 5$$

$y = 135$

3a.) $x \leq 1500$ because exceed means "go above or over" so x cannot be larger such as 1505; can only be less.

b.) $x \geq 35$ because minimum means it has to be at least 35 or more points scored

c.) $x + 68 \geq 150$ because you have 68 laps done but it won't count until you do at least 150 or more.

d.) $x + 3\frac{1}{2} > 5\frac{1}{2}$ or $x > 2\frac{1}{2}$

*** Solve just like normal equations

4a.) $\frac{3x}{3} \leq \frac{123}{3}$

$x \leq 41$

Side work:

$$\begin{array}{r} 41 \\ 3 \overline{) 123} \\ \underline{12} \\ 03 \end{array}$$

b.) $\frac{3}{5} + y > \frac{7}{10}$

$$\begin{array}{r} -\frac{3}{5} \\ \hline y > \frac{1}{10} \end{array}$$

Sidework:

$$\begin{array}{r} \frac{7 \cdot 1}{10 \cdot 1} = \frac{7}{10} \\ -\frac{3 \cdot 2}{5 \cdot 2} = \frac{6}{10} \\ \hline \frac{1}{10} \end{array}$$

