

7.4 SETUP WP #39

WORD PROBLEM SETUP

STUDY TIP

39

KI:

DEFINE VARIABLES

$X =$

$Y =$

Remember
UNITS

Abbrev.
Sign $\rightarrow$ Number of

\$'s $\rightarrow$ findollars

DEFINE EQUATIONS

SOLVE

Answer in words.

7.4

39

KEY INFO

169 Granny Smiths

95 Golden Delicious

Pie needs 5 Granny + 3 delicious

Sauce needs 4 Granny + 2 delicious

$x = \# \text{ of pies}$

$y = \# \text{ of sauces}$

QUESTION $\longrightarrow$ Variables

EQ1 = (Granny Smith)

$$5x + 4y = 169 \quad \checkmark$$

EQ2 = (Golden Delicious)

$$3x + 2y = 95 \quad \checkmark$$

Solve

$$\begin{array}{rcl} 5x + 4y = 169 & \longrightarrow & 5x + 4y = 169 \\ -2(3x + 2y = 95) & \longrightarrow & -6x - 4y = -190 \end{array} \quad \begin{array}{c} \downarrow + \\ \downarrow \end{array}$$

$$\frac{-x}{-1} = \frac{-21}{-1} \quad \text{X=21}$$

FIND Y

$$3(21) + 2y = 95$$

$$63 + 2y = 95$$

$$\frac{-63}{-2} \quad \frac{-63}{-2}$$

$$2y = 32$$

$$y = 16$$

ANSWER You can make 21 apple pies
and 16 apple sauces