

A# 7 N.S. Word Problems #1

Area = base

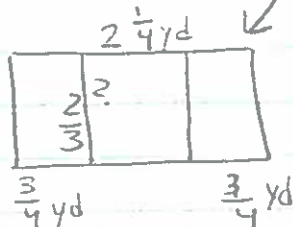
$$1\frac{1}{2} \div 2\frac{1}{4}$$

$$\frac{3}{2} \cdot \frac{4}{4}$$

$$2\frac{2}{3} \text{ yds.}$$

Another way

1)



Important Info is labeled on picture

$$\text{Area} = \text{base} \times \text{height}$$

$$1\frac{1}{2} = 2\frac{1}{4} \times \text{Height}$$

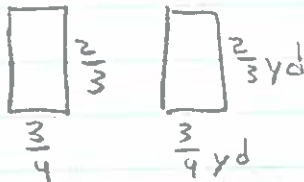
$$\frac{2}{3} = \text{Height}$$

$$\text{Area} = 1\frac{1}{2} \text{ sq yds}$$

$$\frac{3}{2} \div \frac{9}{4} = \frac{3 \cdot 4}{2 \cdot 9} = \frac{12}{18} = \frac{2}{3}$$

a. The height of the banner is $\frac{2}{3}$ yds.

b.)



$$\text{A yellow} = \text{base} \times \text{height}$$

$$A_y = \frac{3}{4} \cdot \frac{2}{3}$$

$$A_y = \frac{1}{2} \text{ sq yds.}$$

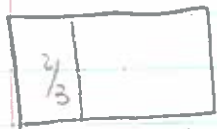
$$+ A_y = \frac{1}{2} \text{ sq yds}$$

$$1 \text{ sq yd.}$$

The yellow rectangles take up 1 sq. yd.

c) The whole banner will be $3\frac{3}{4}$ yds by $\frac{2}{3}$ yds.
The total area will be $2\frac{1}{2}$ square yards.

$$(\text{Area}) = (\text{length}) \times (\text{width})$$



$$\frac{3}{4} + 2\frac{1}{4} + \frac{3}{4} = 3\frac{3}{4} \text{ yds}$$

$$A = 3\frac{3}{4} \cdot \frac{2}{3}$$

$$A = \frac{15}{4} \cdot \frac{2}{3}$$

$$A = 5\frac{1}{2}$$

$$A = 2\frac{1}{2}$$

2)

\$54 mowing lawns

$2\frac{1}{2}$ hours yesterday

$4\frac{1}{4}$ hours today

? Earnings per hour

Naomi earns \$8 per hour.

\$

$$\frac{54}{2\frac{1}{2} + 4\frac{1}{4}}$$

$$\frac{54}{6\frac{3}{4}}$$

$$54 \div 6\frac{3}{4}$$

$$54 \div \frac{27}{4}$$

$$54 \cdot \frac{4}{27}$$

$$8$$

OR

$$(\text{mowing lawns}) \div (\text{# hrs today} + \text{# hrs yesterday})$$

$$54 \div (2\frac{1}{2} + 4\frac{1}{4})$$

$$54 \div (2\frac{2}{4} + 4\frac{1}{4})$$

$$54 \div 6\frac{3}{4}$$

$$54 \div \frac{27}{4}$$

$$\frac{54 \cdot 4}{27} = 8$$

$$8$$

- 3) $\frac{3}{5}$ pound of clay (1 piece)
 $\frac{7}{10}$ pound of clay (other piece)
 $\frac{4}{5}$ pound (3 bags of clay)

? how many bags of clay needed

? how many pounds of clay left over?

$$(\overset{1}{\text{clay}} + \overset{2}{\text{clay}}) \div \text{1 bag}$$

$$\frac{3}{5} + \frac{7}{10} \div \frac{4}{5}$$

$$\frac{6}{10} + \frac{7}{10} \div \frac{4}{5}$$

$$\frac{13}{10} \div \frac{4}{5}$$

$$\frac{13}{10} \cdot \frac{5}{4}$$

$$\frac{13}{8}$$

$\frac{4}{10}$ bags needed

$$3(\frac{4}{5}) = 2\frac{8}{5} \text{ lb's of clay in 3 bags}$$

$$- 1\frac{3}{10} \text{ lb's of clay needed}$$

$$1\frac{1}{10} \text{ lb's left over}$$

Eva. needs $1\frac{5}{8}$ bags of clay. She will have $1\frac{1}{10}$ lb left over.

- 4) $1\frac{1}{2}$ pounds red clay
 $\frac{3}{4}$ pound yellow clay
 $\frac{1}{8}$ needed each class
 How many students?

$$(\text{Red clay} + \text{yellow clay}) \div (\text{Each Student})$$

$$(1\frac{1}{2} + \frac{3}{4}) \div \frac{1}{8}$$

$$1\frac{5}{4} \div \frac{1}{8}$$

$$\frac{9}{4} \cdot \frac{8}{1}$$

18

Only 18 students can use clay for their art project.

(yellow) - (used)

5. $1\frac{1}{3}$ gallons yellow

$1\frac{1}{4}$ gallons green

$\frac{7}{8}$ gallons blue

$\frac{3}{4}$ gallons of each color

How many gallons left over?

$$1\frac{1}{3} - \frac{3}{4}$$
$$\times \frac{4}{12} - \frac{9}{12}$$

$\frac{1}{2}$ left

(green) - (used)

$$1\frac{1}{4} - \frac{3}{4}$$
$$\frac{5}{4} - \frac{3}{4}$$

$\frac{1}{2}$ left

(blue) - (used)

$$\frac{7}{8} - \frac{3}{8}$$
$$\frac{4}{8} - \frac{3}{8}$$

$\frac{1}{8}$ left.

$$\begin{array}{r} \text{(yellow left)} \\ + \frac{7}{12} \\ + \frac{1}{24} \\ \hline \frac{15}{24} \\ \text{(green left)} \\ + \frac{10}{24} \\ + \frac{3}{24} \\ \hline \frac{13}{24} \\ \text{(blue left)} \\ + \frac{1}{24} \\ + \frac{1}{24} \\ \hline \frac{2}{24} \end{array}$$

Mark will have $\frac{7}{12}$ of a gallon of yellow, $\frac{1}{2}$ of a gallon of green and $\frac{1}{8}$ of a gallon of blue paint leftover. This is a total of $1\frac{1}{24}$ gallons of paint leftover.

6. 120 words per minute

1.75 minutes

? How many total words?

(Words per min) (# of minutes)

$$120(1.75)$$

210

$$\begin{array}{r} 1.75 \\ \times 120 \\ \hline 3500 \\ 17500 \\ \hline 21000 \end{array}$$

Dorothy typed 210 words in 1.75 minutes.

7. \$1.20 per pound (apples)

$\frac{3}{4}$ lb bought

How much spent?

(\$ per pound) (pound)

$$1.20 \left(\frac{3}{4}\right)$$

$$1.20(0.75)$$

.90

Logan spent 90¢ on apples.

8. $4\frac{2}{3}$ cups popcorn

$1\frac{1}{4}$ cups peanuts

$\frac{1}{3}$ cups raisins

$\frac{3}{4}$ cup sunflower seeds

5 friends given mix.

How much did each get?

Each of his friends will get $1\frac{3}{5}$ cups of trail mix.

(Pop + peanut + rais + seed) / (friends)

$$\left(4\frac{2}{3} + 1\frac{1}{4} + \frac{1}{3} + \frac{3}{4}\right) \div 5$$

$$\left(4\frac{8}{12} + 1\frac{3}{12} + \frac{4}{12} + \frac{9}{12}\right) \div 5$$

$$6\frac{24}{12} \div 5$$

$$\frac{8}{1} \div 5$$

$1\frac{3}{5}$

9.) \$3.25 hour walking dogs
 $\frac{1}{3}$ of an hour morning
 $\frac{1}{2}$ hour in the afternoon

a.) How much time spent?
 Carl walked them $\frac{5}{6}$ of
 an hour every day.

(morning) + (after)

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

$$\frac{2}{6} + \frac{3}{6}$$

$\frac{5}{6}$ of an hour

b.) How much time per week?

(total per day) (# of days week)

Carl spent $5\frac{5}{6}$ hours
 walking the dogs in
 a week.

$$\frac{5}{6} \cdot \frac{7}{1}$$

$$\frac{35}{6}$$

$$5\frac{5}{6}$$

c. 10 minutes is $\frac{1}{6}$ of an hour.
 how many minutes walking?

(total) \div ($\frac{1}{6}$ minutes)

$$5\frac{5}{6} \div \frac{1}{6}$$

$$\frac{35}{6} \cdot \frac{6}{1}$$

Carl walks the dogs for
 350 minutes

$$35 (10 \text{ minute})$$

d. how much earned in a week?

$$35 (10) = 350$$

Carl earns about \$18.96 by walking
 dogs each week.

(hours walked) (# per hour)

$$5\frac{5}{6} \cdot (\$3.25)$$

$$\frac{35}{6} \cdot \frac{3.25}{1}$$

$$\frac{113.75}{6}$$

$$\approx 18.96$$