

BE-1A MONDAY 11-8-10

⑥ $\frac{1}{8} \Rightarrow 8 \overline{) 1.00}$ "MOON THE FRACTION"

Change to decimals by long division, then change each decimal to a percent.

① $\frac{1}{4}$ ② $\frac{3}{8}$ ③ $\frac{3}{25}$

④ Is $\frac{3}{25} = \frac{12}{100}$ A proportion?

⑤ Do you see AN EASIER WAY TO change $\frac{3}{25}$ to a percent than long division?

1.
To change $\frac{3}{25}$ to a percent
↑
per 100
↑
 $\div 100$

Let P = the percent (book uses r)

Then $\frac{3}{25} = \frac{P}{100}$

$$\frac{25P}{25} = \frac{3 \cdot 100}{25}$$

THE CROSS-
PRODUCTS OF A
PROPORTION ARE
EQUAL.

$$P = \frac{3 \cdot 100^4}{\cancel{25}_1}$$

$$P = 12 \quad \therefore \frac{3}{25} = \frac{12}{100} = \boxed{12\%}$$

THIS IS EXAMPLE 1 PAGE 160 $\Rightarrow$ Ch. 3-7

(Ex) $\frac{18}{30}$ is WHAT % ?
(percent)

$$\frac{18}{30} = \frac{9}{15} = \frac{3}{5} \Rightarrow \text{WHAT \%}$$

$\frac{3}{5} = \frac{P}{100}$ WHAT PART OF 100
is $\frac{3}{5}$? This is
the definition of
percent

$$\frac{5P}{5} = \frac{3 \cdot 100}{5}$$

$$P = \frac{3 \cdot 20}{1} = 60$$

$$\therefore \boxed{\frac{3}{5} = 60\%}$$

$$\text{or } \frac{3}{5} = .6 = .60 = 60\%$$

LOOK AT WHAT $\frac{3}{5} = \frac{P}{100}$

AND $\frac{3}{25} = \frac{P}{100}$

HAVE IN COMMON:

$$\frac{3}{5} = \frac{P}{100} \Rightarrow \frac{5P}{5} = \frac{3 \cdot 100}{5}$$

$$P = \frac{3}{5} \cdot 100$$

$$\frac{3}{25} = \frac{P}{100} \Rightarrow \frac{25P}{25} = \frac{3 \cdot 100}{25}$$

$$P = \frac{3}{25} \cdot 100$$

To find P, the percent, multiply the original fraction times 100

ⓔX WHAT % is $\frac{9}{20}$

$$\frac{9}{20} \cdot 100 = 45 \therefore \frac{9}{20} = \boxed{45\%}$$

Every DAY ON THE NEWS you hear numbers like:

"the cost of milk went up 3% this week"

or "Alabamians drove 5% fewer miles this month"

What do these numbers mean?

These are examples of Percent Change

Percent Change is either Positive or Negative

positive means "going up"

negative means "going down"

$$\text{Percent Change} = \frac{\text{CHANGE}}{\text{ORIGINAL}} \cdot 100$$

EX1
Pg 160

ORIGINAL: 25 Find Percent
New: 28 Change

New is Bigger $\therefore$ P is +

Change is $28 - 25 = +3$

Percent Change is $\frac{\text{CHANGE}}{\text{ORIGINAL}} \cdot 100$

$$\Rightarrow \frac{3}{25} \cdot 100$$

$$\Rightarrow \frac{3}{1} \cdot 4 = \boxed{12\% \uparrow}$$

$\uparrow$
MUST WRITE PERCENT
increase or use AN
UP ARROW

Ex 1
Pg 160

ORIGINAL: 30
NEW: 12

Find % change

% change is $30 - 12 = 18$

$$\therefore \frac{\text{CHANGE}}{\text{ORIGINAL}} \cdot 100 = P$$

$$\frac{18}{30} \cdot 100 = P$$

$$\frac{3}{5} \cdot 100 = P$$

$$\boxed{60\% \downarrow}$$

*m
memory
AID

$\frac{C}{O}$ looks like %

$$\frac{\underline{\text{change}}}{\underline{\text{original}}}$$

get it?

Practice $\Rightarrow$ Page 162 # 4-7

To nearest whole percent



THE "ONES" PLACE

16% NOT 16.1%

Homework: Pg. 162 # 14-20

NOTE: • you can have % $\uparrow$ over 100%

• if your item can be negative
you can have % $\downarrow$ over 100%

Ex

orig: 10

new: 40

$$P = \frac{30}{10} \cdot 100 = 300\% \uparrow$$

orig: 10

new: 0

$$P = \frac{10}{10} \cdot 100 = 100\% \downarrow$$