

6-1C Percent and Estimation

11-14-14 Glencoe Math 7

Remember: $\frac{\text{is}}{\text{of}} = \frac{p}{100}$

Estimating - using numbers/values that are easier to calculate and allow us to do mental math

Ex: 32% \rightarrow use 30% $9.7 \approx 10$ \approx "is approximately equal to"

Ex. 1 Estimate.

A) 47% of 70

$47\% \approx 50\%$

$$\frac{x}{70} = \frac{50}{100}$$

$$\frac{100x}{100} = \frac{3500}{100}$$

$x = 35$

or what is half of 70?

Reality: 47% of 70 < 35
since we rounded up

B) 67% of 8.7

$67\% \approx 70\%$

$8.7 \approx 9$

$$\frac{x}{9} = \frac{70}{100}$$

$$\frac{100x}{100} = \frac{630}{100}$$

$x = 6.3$

Reality: 67% of 8.7 < 6.3
since we rounded
both values up

C) $\frac{3}{4}\%$ of 168

$\frac{3}{4}\% \approx 0.75\% \approx 1\%$

$168 \approx 170$

$$\frac{x}{170} = \frac{1}{100}$$

$$\frac{100x}{100} = \frac{170}{100}$$

$x = 1.7$

Reality: $\frac{3}{4}\%$ of 168 < 1.7

D) Of the 78 teenagers at youth camp, 63% have birthdays in the spring.
About how many have birthdays in the spring?

63% of 78

$63\% \approx 60\%$ (rounded down)

$78 \approx 80$ (rounded up)

$$\frac{x}{80} = \frac{60}{100}$$
$$100x = 80 \cdot 60$$
$$\frac{100x}{100} = \frac{4800}{100}$$

$x = 48$

About 48 teenagers have birthdays in the spring.