

Proportional Reasoning  
Quiz 3 (Q2) - Practice Quiz

Directions:

- 1) YOU MAY USE A CALCULATOR.
- 2) THIS MUST BE DONE IN PENCIL.
- 3) EACH PROBLEM IS LABELED WORTH 2 POINTS, UNLESS NOTED OTHERWISE

Estimate Percents of Number.

- 1.) 68% of 9.2

$$\begin{aligned} &70\% \text{ of } 9 \\ &0.7 \times 9 = \boxed{6.3} \end{aligned}$$

- 2.) 249% of 119

$$\begin{aligned} &250\% \text{ of } 120 \\ &2.5 \times 120 = \boxed{300} \end{aligned}$$

- 3.) Estimate 21% of 348

$$\begin{aligned} &20\% \text{ of } 350 = \\ &0.2 \times 350 = \boxed{70} \end{aligned}$$

Estimate each Percent.

- 4.) 6 out of 35

$$\frac{6}{35} = \frac{1}{6} \approx \boxed{16.6\%}$$

- 5.) 9 out of 23

$$\frac{10}{25} = 0.4 \approx \boxed{40\%}$$

- 6.) In the year 2002, 1,053 species of animals were endangered or threatened. Of these species, 340 were mammals. Estimate the percent of endangered or threatened animals that were mammals.

$$\frac{350}{1050} = \frac{1}{3} = 0.33 = \boxed{33\%}$$

Find the Percent of Change. Round to the nearest tenth. State whether the percent of change is decrease or increase.

- 7.) Original 560, new 420

Decrease

$$\frac{\text{New} - \text{Original}}{\text{Original}} = \frac{420 - 560}{560} = \frac{-140}{560} = \boxed{25\%}$$

- 8.) Original 27, new 39

$$\frac{39 - 27}{27} = \frac{12}{27} = \frac{4}{9} = 0.\bar{4} = \boxed{44\%} \quad \boxed{\text{INCREASE}}$$

$$\frac{150-98}{98} = \frac{52}{98} \approx 53\%$$

9.) Original 98, new 150

Find the selling price of each item.

10.) Computer \$700, 30% mark up

$$30\% = 0.3$$

$$700 \times 0.3 = 210$$

$$\begin{array}{r} \boxed{210} \text{ MARK UP} \\ 700 \\ + \\ \boxed{910} \end{array} \rightarrow \text{selling price}$$

11.) Jeans \$25, 45% mark up

$$45\% = 0.45$$

$$0.45 \times 25 = 11.25 \text{ MARK UP}$$

$$\begin{array}{r} 25 \\ + 11.25 \\ \hline \boxed{36.25} \end{array} \text{ selling price}$$

12.) Video Game \$75, 25% off

$$25\% = 0.25$$

$$0.25 \times 75 = \boxed{18.75}$$

OFF (DISCOUNT)

$$\begin{array}{r} 75 \\ - 18.75 \\ \hline 56.25 \end{array}$$

selling

13.) What is the markup rate on \$75 game system that sells for \$230?

$$\frac{\text{New} - \text{Old}}{\text{Old}} = \frac{230 - 75}{75} = 2.06 \approx 207\%$$

14.) What is the discount rate on a \$32 watch that regularly sells for \$24?

$$\frac{\text{New} - \text{Old}}{\text{Old}} = \frac{24 - 32}{32} = -\frac{8}{32} = -\frac{1}{4} \text{ 25\% discount rate}$$

Find the simple interest rate to the nearest cent.

15.) \$250 at 6.5% for 3 years

$$P = 250$$

$$R = 6.5\% = 0.065$$

$$T = 3$$

$$I = PRT = \boxed{48.75}$$

16.) \$5200 at 13.5% for 18 months

$$P = 5200 \quad R = 13.5\% = 0.135$$

$$I = \boxed{1053}$$

17.) SAVINGS ACCOUNT Malik deposited \$1,050 in a savings account, and it earned \$241.50 in simple interest after four years. Find the interest rate on Malik's savings account.

$$P = 1050$$

$$T = 4$$

$$I = PRT$$

$$I = 241.50$$

$$R = ?$$

$$241.5 = 1050 \cdot R \cdot 4$$

$$241.5 = 4200 \cdot R$$

$$\boxed{R = 5.75\%}$$

18.) INVESTMENTS Terry invested \$2,200 in the stock market for 2 years. If the investment earned 12% simple interest, how much money did Terry earn in interest in 2 years?

$$P = 2200$$

$$T = 2$$

$$I = 2200 \times 2 \times 0.02 = 88$$

$$I = 7$$

$$R = 2\% = 0.02$$

TERRY EARNED \$88 in 2 years.