

Notes 8.1B Percentage Practice

Final Amount = % of Initial Amount

$$A = PB$$

1) Mario deposits \$1000 and he earns 2.25% annual interest. How much money does he have at the end of one year? $A = PB$

$$A = .0225(1000) = 22.50$$

$$\text{Total} = 1000 + 22.50 = \boxed{\$1022.50}$$

2) Eileen earned \$50 in interest from a savings account with a 2.25% annual interest rate. Assuming she made no deposits or withdrawals during the year, what is the balance in the account? $50 = .0225 B$

$$\begin{array}{r} \$2222.22 = B \\ + 50 \\ \hline \end{array}$$

$$\boxed{\$2272.22}$$

3) Gloria has \$1200 in a savings account with a 2.25% annual interest rate. Assuming she made no deposits or withdrawals during the year, how much did she deposit a year ago? $102.25\% \rightarrow 1.0225$

$$1X + .0225X = 1200$$

$$1.0225X = 1200$$

$$X = \boxed{\$1173.59}$$

4) Maggie's monthly take home pay (after taxes) is \$995. If she pays 27% in taxes, what is her gross pay? $\leftarrow \text{Net pay} = \text{take home}$

$$1X - .27X = 995$$

$$X(1 - .27) = 995$$

$$X(.73) = 995$$

$$X = \boxed{\$1363.01}$$

$\leftarrow \text{Gross pay} = \text{TOTAL}$

5) Zach's monthly take home pay (after taxes) is \$1200. If his gross pay (before taxes) is \$1600, what is his tax rate? $-x$

$$1600 - 1600x = 1200$$

$$\boxed{X = 25\%}$$

$$1600(1-x) = 1200$$

$$1-x = .75$$

$$.25 = x$$

6) Tatianna's receipt shows that you paid \$73.61 for a new pair of jeans including sales tax. The sales tax rate is 8.25%. How much did the jeans cost pre-tax? How much did you pay in tax?

$$73.61 = X + X(.0825)$$

$$73.61$$

$$73.61 = X(1.0825)$$

$$- 68$$

$$\frac{73.61}{1.0825} = X = \boxed{\$68}$$

$$\boxed{\$5.61 \text{ in tax}}$$

HW: WS 8.1B

Gross Pay = All
Net Pay = GP - Tax

Notes 8.1B Percentage Practice

Final Amount = % of Initial Amount

$$A = P B$$

1) Mario deposits \$1000 and she earns 2.25% annual interest. How much money does she have at the end of one year? (including interest)

102.25%
~~100%~~ of 1000 =
 $1.0225 \times 1000 = \$1022.50$

2) Eileen earned \$50 in interest from a savings account with a 2.25% annual interest rate. Assuming she made no deposits or withdrawals during the year, what is the balance in the account?

$50 = 2.25\%$ of deposit
 $50 = 0.0225 \times$
 $\$2272.22 = x$

3) Gloria has \$1200 in a savings account with a 2.25% annual interest rate. Assuming she made no deposits or withdrawals during the year, how much did she deposit a year ago?

with interest

$x + 0.0225x = 1200$ $102.25\% \rightarrow 1.0225$
 $1.0225x = 1200$
 $x = \$1173.59$

4) Maggie's monthly take home pay (after taxes) is \$995. If she pays 27% in taxes, what is her gross pay?

pre-tax

if you deduct taxes from gross pay.

they take away = taxes from your pay (gross)
 $x - 0.27x = 995$ $(100 - 27)\%$
 $0.73x = 995$ 73%
 $x = \$1363$ 0.73

5) Zach's monthly take home pay (after taxes) is \$1200. If her gross pay (before taxes) is \$1600, what is his tax rate?

tax rate
P%

$1200 = 1600 - \frac{P}{100} \cdot 1600$ $1200 = (1-r) \cdot 1600$
 $\frac{400}{1600} \times 100$ or
 $25\% = P$ $25\% = r$

6) Tatianna's receipt shows that you paid \$73.61 for a new pair of jeans including sales tax. The sales tax rate is 8.25%. How much did the jeans cost pre-tax? How much did you pay in tax?

$73.61 = x + 0.0825x$ 108.25% of pre-tax
 $73.61 = 1.0825x$ = total w/ tax.
 $\$68 = x$

\$5.61 in tax