



Name: key
Date: _____

1.4 Sales Prices

Investigate:

Your dream pair of shoes at Free Ride costs \$139.98. It is your lucky day and you get 50% off. What is the new price of the shoes before tax? Show your work.

Connect:

Discount, sale, and promotion are all terms that mean you will pay less than the price on the tag. Calculating discount is similar to calculating mark up. First convert the percent to a decimal. Then multiply the cost of the item by the decimal. Next subtract the answer from the original cost. Finally, check to make sure your answer makes sense.

Examples:

1. a. Ms. Briker decided she wanted to buy a new iPod to replace the one she accidentally washed. At Best Buy the iPod costs \$179.99 and is 15% off. What is the new price of the iPod before tax?

$$\begin{array}{l} 15\% \text{ of } 179.99 \\ 0.15 \times 179.99 = 26.9985 \rightarrow \$27.00 \\ \begin{array}{r} 179.99 \\ - 27.00 \\ \hline \$152.99 \end{array} \end{array}$$

- b. What is the new price of the iPod including tax?

$$\begin{array}{l} 12\% \text{ of } 152.99 \\ 0.12 \times 152.99 = 18.36 \end{array}$$

$$\begin{array}{r} \$152.99 \\ + 18.36 \\ \hline 171.35 \end{array} \quad \text{Remember tax is added to the total.}$$

2. A fisher sells fresh salmon and prawns during the week. As the weekend approaches, he needs to sell off his stock, otherwise it will spoil. He offers 20% off all his prices. Salmon is regularly \$18.50/kg and prawns are \$34.50/kg.

a. What is the price of salmon that weighs 3 kg?

$$\begin{aligned}
 &20\% \text{ of } \$18.50 \\
 &0.20 \times 18.50 = \$3.70 \\
 &18.50 - 3.70 = \$14.80/\text{kg} \\
 &14.80 \times 3 = \$44.40
 \end{aligned}$$

OR

$$\begin{aligned}
 &18.50 \times 3 = \$55.50 \\
 &20\% \text{ of } 55.50 \\
 &0.20 \times 55.50 = \$11.10 \\
 &55.50 - 11.10 = \$44.40
 \end{aligned}$$

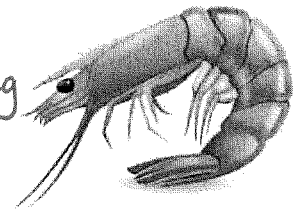
b. How much would 500 g of prawns cost?

conversion: $1000 \text{ g} = 1 \text{ kg} \implies 500 \text{ g} \times \frac{1 \text{ kg}}{1000 \text{ g}} = 0.5 \text{ kg}$

$$\begin{aligned}
 &0.20 \times 34.50 = \$6.90 \\
 &34.50 - 6.90 = \$27.60
 \end{aligned}$$

$$\$27.60 \times 0.5 = \$13.80$$

OR
Divide \$27.60 by 2 bc 500g is half of 1000g (1kg)



3. What is the percentage markdown if a \$175.00 portable Bose speaker sells for \$150.00?

$$\begin{array}{r}
 \$175.00 \\
 -150.00 \\
 \hline
 25.00
 \end{array}$$

\$25 out of \$175.00

$$\frac{25}{175} = 0.1428571 \times 100 = 14.28\%$$

4. Josie specializes in selling products from the Philippines, including rattan, bamboo, and palm baskets. Medium sized bamboo baskets are regularly priced at \$19.98. They are on sale, advertised as "Buy one, get the second at half price." What is the discount rate as a percent?

cost of 2 baskets:

$$\$19.98 \times 2 = \$39.96$$

half price of one:

$$19.98 \times 0.5 = \$9.99$$

$$\frac{\text{discount}}{\text{regular}} = \frac{9.99}{39.96} = 0.25 \times 100 = 25\%$$