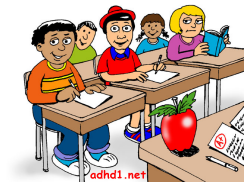


Warm Up Gr 8

Date: Oct 22



Quiz Friday

Percent, decimal fraction, sales tax & discount



Find the total price including tax to buy this in NB.

$$\begin{aligned} \text{Tax} &= 15\% \text{ of Price} \\ &\downarrow \\ &0.15 \times \$1698 \\ &= \$254.70 \end{aligned}$$

$$\begin{aligned} \text{Cost w tax} &= \text{Price} + \text{Tax} \\ &= \$1698 + \$254.70 \\ &= \$1952.70 \end{aligned}$$

WS solutions

1. Find the amount of sales tax required in NB, for the following items:

(a) a desk \$79

(b) A Box of chocolates \$9.95

(c) a TV \$ 890.99

(d) a pair of sneakers \$129.98

$$1a) \text{ Tax} = 15\% \text{ of } \$79$$

$$= 0.15 \times \$79$$

$$= \$11.85$$

$$1b) \text{ Tax} = 15\% \text{ of } \$9.95$$

$$= 0.15 \times \$9.95$$

$$= \$1.49$$

$$1c) \text{ Tax} = 15\% \text{ of } \$890.99$$

$$= 0.15 \times \$890.99$$

$$= \$133.65$$

$$1d) \text{ Tax} = 15\% \text{ of } \$129.98$$

$$= 0.15 \times \$129.98$$

$$= \$19.50$$

Solutions

- (a) a phone \$ 74.50
 (c) a T-Shirt \$ 27.45
 (e) A coat \$45.67
 (g) Furby \$64.60
 (i) Kids Snow suit \$89.99

- (b) a pair of gloves \$ 7.65
 (d) a supper \$ 12.35
 (f) sled \$ 24.99
 (h) a PVR \$ 312.15
 (j) a popcorn \$5.39

$$\begin{aligned} 2a) \text{ Tax} &= 15\% \text{ of } \$74.50 \\ &= 0.15 \times \$74.5 \\ &= \$11.18 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$74.50 + \$11.18 \\ &= \$86.68 \end{aligned}$$

$$\begin{aligned} b) \text{ Tax} &= 15\% \text{ of } \$7.65 \\ &= 0.15 \times \$7.65 \\ &= \$1.15 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$7.65 + \$1.15 \\ &= \$8.80 \end{aligned}$$

$$\begin{aligned} c) \text{ Tax} &= 15\% \text{ of } \$27.45 \\ &= 0.15 \times \$27.45 \\ &= \$4.12 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$27.45 + \$4.12 \\ &= \$31.57 \end{aligned}$$

$$\begin{aligned} d) \text{ Tax} &= 15\% \text{ of } \$12.35 \\ &= 0.15 \times \$12.35 \\ &= \$1.85 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$12.35 + \$1.85 \\ &= \$14.20 \end{aligned}$$

$$\begin{aligned} e) \text{ Tax} &= 15\% \text{ of } \$45.67 \\ &= 0.15 \times \$45.67 \\ &= \$6.85 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$45.67 + \$6.85 \\ &= \$52.52 \end{aligned}$$

$$\begin{aligned} f) \text{ Tax} &= 15\% \text{ of } \$48.74 \\ &= 0.15 \times \$24.99 \\ &= \$3.75 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$24.99 + \$3.75 \\ &= \$28.74 \end{aligned}$$

$$\begin{aligned} g) \text{ Tax} &= 15\% \text{ of } \$64.60 \\ &= 0.15 \times \$64.60 \\ &= \$9.69 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$64.60 + \$9.69 \\ &= \$56.29 \end{aligned}$$

$$\begin{aligned} h) \text{ Tax} &= 15\% \text{ of } \$312.15 \\ &= 0.15 \times \$312.15 \\ &= \$46.82 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$312.15 + \$37.50 \\ &= \$358.97 \end{aligned}$$

$$\begin{aligned} i) \text{ Tax} &= 15\% \text{ of } \$89.99 \\ &= 0.15 \times \$89.99 \\ &= \$13.50 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$89.99 + \$13.50 \\ &= \$103.49 \end{aligned}$$

$$\begin{aligned} j) \text{ Tax} &= 15\% \text{ of } \$5.39 \\ &= 0.15 \times \$5.39 \\ &= \$0.81 \end{aligned}$$

$$\begin{aligned} \text{Total costs} &= \text{Price} + \text{tax} \\ &= \$5.39 + \$0.81 \\ &= \$6.28 \end{aligned}$$

Discount and Sales Price

A discount is when they reduce the amount of an item or they put an item on sale. ****Always change % to decimal before using****

$$\begin{aligned} \text{Amount SAVED} &= \% \text{ of discount} \times \text{Regular Price} \\ \text{or amount discounted} &= (\text{Change to decimal}) \times \text{Regular Price} \end{aligned}$$

$$\text{Sale Price} = \text{Regular Price} - \text{Amount of SAVED}$$

Example 1)

A stereo regularly sells for \$149.99, but it is on sale for 20% off.

- (a) Find the amount of discount
(b) Find the sale price

(a) Amt. of Discount = Rate of discount x Regular price

$$\begin{aligned} &= 20\% \text{ of Price} \\ &= 0.20 \times \$149.99 \\ &= \$29.998 \end{aligned}$$

(b) Sale Price = Regular Price - Amt. of Discount

$$\begin{aligned} &= \$149.99 - \$30.00 \\ &= \$119.99 \end{aligned}$$

2. A jacket that regularly sells for \$72.50 is discounted by 15%. What is the sale price?

$$\begin{aligned}\text{Amount Saved} &= \text{Discount \% of Price} \\ &= 15\% \text{ of } \$72.50 \\ &\quad \downarrow \\ &= 0.15 \times \$72.50 \\ &= \$10.87\end{aligned}$$

$$\begin{aligned}\text{Sale Price} &= \text{Price} - \text{Saved} \\ &= \$72.50 - \$10.87 \\ &= \$61.63\end{aligned}$$

Security Cameras Regular cost \$299.99 but are going on sale for 30% off.

- What is the amount saved?
- What is the sales price?
- What is the Tax on the price?
- What is the cost with tax?

$$\begin{aligned}
 \text{Amt of Disc} &= 30\% \text{ of } \$299.99 \\
 &= 0.30 \times \$299.99 \\
 &= \$90.00
 \end{aligned}$$

$$\begin{array}{r}
 \boxed{89.997} \\
 \swarrow \\
 90.00
 \end{array}$$

$$\begin{aligned}
 \text{Sale Price} &= \text{Price} - \text{Amount Saved} \\
 &= 299.99 - \$90.00 \\
 &= \$209.99
 \end{aligned}$$

$$\begin{aligned}
 \text{Tax} &= 15\% \text{ of Price} \\
 &= 0.15 \times 209.99 \\
 &= \$31.50
 \end{aligned}$$

$$\begin{aligned}
 \text{Total Cost} &= \text{Price} + \text{Tax} \\
 &= 209.99 + 31.50 \\
 &= \$241.49 \\
 &=
 \end{aligned}$$

You try

Ex 2) A movie is regularly \$19.99. If it goes on sale for 8% off then what is sales price? (Show all work)

$$\begin{aligned} \text{Movie} &= \$19.99 && 8\% \text{ disc} \\ \text{Disc} &= 8\% \text{ of } 19.99 \\ &= \frac{8}{100} \times 19.99 \\ &= 1.5992 \approx 1.60 \\ \text{Sale Price} &= \text{Price} - \text{Disc} \\ &= 19.99 - 1.60 \\ &= \$18.39 \end{aligned}$$

Homework Sheet 247 # 1 , 2, 3

$$\text{Sales Price} = \text{Price} - \text{Amount Discount}$$

$$\text{Amount Discount} = \% \times \text{Price}$$

↓
Decimal

1. Calculate the sale price if you have 30% off of \$29.99

- 2) For each of the following calculate the discount only.
 1. 40% off 9.98 b. 96% off \$5 c. 1% off \$17.60 d. 10% off \$19.95
e. 5% off 3.25

 - f. 20% off \$87.49 g. 29% off \$1500 h. 33.3% off \$15

- 3) A \$7.99 t-shirt is on sale for 50% off. Fred buys 6 t-shirts how much does he save?

Sheet 247 Calculating Discount.docx