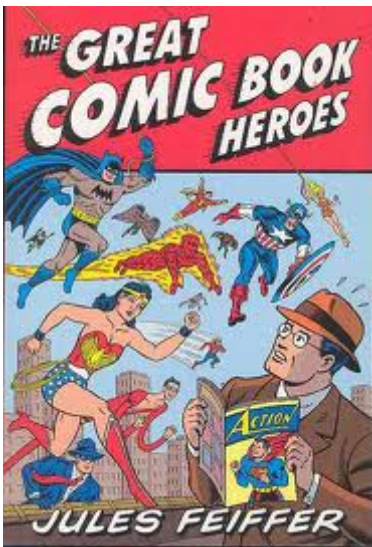


**WARM-UP...**

Ms. Ronan purchases an order of 425 comic books for \$700.00. She plans to mark the price up by 90%. What will she charge her customers for one comic book?

```
700/425
1.647058824
Ans*1.9
3.129411765
■
```

**MATH ON THE JOB**

Danielle is the owner of a company in Saint John, New Brunswick, that installs ceramic tile, marble, slate, terrazzo, and granite for exterior and interior walls, floors, and other surfaces. Early spring is a slow time for this type of business, so Danielle's company is offering discounts on materials left in stock from last year. To get the most from this **promotion**, Danielle needs to calculate what percentage discount to offer on each type of material, taking into account what her costs were and how much stock remains. She may also offer a variety of discounts based on quantities bought.

The company has in stock 12" × 12" slate in sandstone colour that sold for \$6.99 per square foot last year. If Danielle offers it at a 15% discount, what will the sale price be for 50 square feet of slate, before taxes?



*During periods when business is slow, a business owner can increase sales by getting in touch with past or potential clients.*

**SOLUTION**

Imperial measurements are standard in the construction trades. Discuss with students the number of tiles needed. Each tile is 12" × 12" or 1' × 1'. Calculate using feet since the price is given per square foot. Since 50 square feet of slate are needed, calculate the cost of 50 tiles.

**Note:** Some students may not understand the concept of "square feet." Draw a square on the board and label each side as 4. Then draw in vertical and horizontal lines within the square to total 16 boxes within the space. Each side measures 4 linear feet. The area within the square becomes the square footage since the area of the square (4 × 4) is 16. In this example, 50 square feet could be represented by a 10' × 5' rectangle or a 25' × 2' rectangle, or some other shape. Point out that the shape does not have to be a square; remind students that it is area that is being discussed.

**COST METHOD 1:** 2-step process

First find the percent discount on one tile and subtract that amount from the original price. Remember to convert the percent to a decimal.

$$\begin{aligned} \$6.99 \times 0.15 &= \$1.0485 \\ \$6.99 - \$1.05 &= \$5.94 \text{ per tile} \\ \$5.94 \times 50 &= \$297.00 \end{aligned}$$

**COST METHOD 2:** 1-step process

If the discount per tile is 15%, then you can calculate the discount percentage.

$$\begin{aligned} 100\% - 15\% &= 85\% \\ \$6.99 \times 0.85 &= \$5.94 \text{ a tile} \end{aligned}$$

Multiply to find the total cost.

$$\$5.94 \times 50 = \$297.00$$

Copy these two notes...

**promotion:** an activity that increases awareness of a product or attracts customers

**Common Discounts...**

- 70 % off
- save \$30
- BOGO
- 1/2 price

Discount . . .

Multiply by

$1 - \%$  as a decimal

**EXAMPLE:**

Jonas needs to buy a new winter jacket. He has waited for a sale, and a jacket that originally cost \$249.95 is now discounted 20%. How much will the jacket cost if Jonas lives in Nova Scotia, where HST is 15%?

**This Way:**

Focus... How much is taken off?

1) Find the discount

$$\begin{array}{r} \$249.95 \times 0.20 \\ \hline \$49.99 \end{array}$$

2) Find the sale price

$$\begin{array}{r} \$249.95 - \$49.99 \\ \hline \$199.96 \end{array}$$

3) Add the tax

$$\begin{array}{r} \$199.96 \times 1.15 \\ \hline \$229.95 \end{array}$$

**That way:**

Focus...

How much do you still have to pay?

1) Find the sale price

$$\begin{array}{r} \$249.95 \times 0.80 \\ \hline \$199.96 \end{array}$$

1 - % (decimal)

2) Add the tax

$$\begin{array}{r} \$199.96 \times 1.15 \\ \hline \$229.95 \end{array}$$



**SOLUTION...**  
Delete to reveal

Copy these formulas...

What percent did you pay?  

$$\frac{\text{Amount Paid}}{\text{Total Amount}} \times 100\%$$

\$76.49 Sale Price



\$89.99

Regular Price

$$\frac{\$76.49}{\$89.99} = 0.85$$

85%

What percent did you save?

$$\frac{\text{Amount saved}}{\text{Total Amount}} \times 100\%$$



\$89.99 Regular Price

\$76.49 Sale Price

$$\begin{array}{r} \$89.99 \\ -\$76.49 \\ \hline \$13.50 \end{array}$$

$$\frac{\$13.50}{\$89.99} = 0.15$$

15%

Rate of Discount

- is equal to...

$$\frac{\text{Amount of Discount}}{\text{Regular Price}} \times 100\%$$

ex: Reg.  $\Rightarrow$  \$299.00  
 Sale Price  $\Rightarrow$  \$279.00  
 What is the rate of discount?

$$\begin{aligned} \text{Discount} &= \text{Reg} - \text{Sale} \\ &= 299.00 - 279.00 \\ &= \$20 \\ \text{R.O.D} &= \frac{20}{299} \times 100\% \\ &= 7\% \end{aligned}$$

Determine the **rate of discount** in each of the following...



HP PAVILION LAPTOP  
 AMD Turion™ 64 X2 Mobile Technology TL-64  
 • 2 GB memory, 320 GB hard drive (160 x 2)  
 • DVD Super Multi drive with HD DVD support  
 • Wireless A/D/G/M, Firewire, HDMI  
 • 256 MB NVIDIA GeForce 6400M GS graphics  
 DQ187, DV100CA

256 MB DEDICATED VIDEO MEMORY!

17" Widescreen LCD

SAVE \$380

**899<sup>96</sup>**

Bluetooth

Rate = 30 %


Reg = 899.96 + 380  
 Reg = 1279.96

166-piece socket set  
 #58-9225-6

Sale: \$48.88  
 Reg: \$179.99  
 Save 70%

Handwritten calculation:  
 $\frac{380}{1279.96} \times 100 = 30\%$

Rate = 70 %



Simoniz® S1900  
 Electric Pressure  
 Washer

Sale: \$229.99  
 Reg: \$349.99  
 1/3 Off

Rate = 33 %

Handwritten calculation:  
 $\frac{1}{3} \times 100\% = 33\%$



and evenness

Tostitos Doritos

WAS 3.79

**2.99**

Doritos tortilla chips  
 Tostitos or Ruffles potato chips  
 selected varieties, 400-440 g

Rate = 21 %



## HOMEWORK

Page 37 Questions 1 to 7.

[Worksheet - On Sale.pdf](#)



[1.4 Build Your Skills Detailed Solutions.pdf](#)



## Attachments

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1.4 Build Your Skills Detailed Solutions.pdf

Worksheet - On Sale.pdf