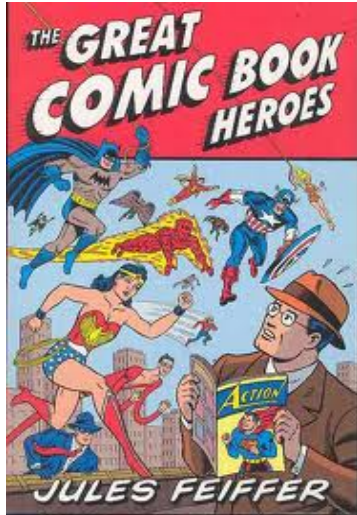
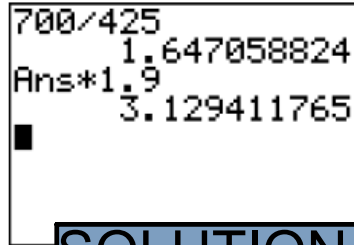


WARM-UP...



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?



SOLUTION...
Delete to reveal

$$700 \times 1.90 = 1330$$

$$\frac{1330}{425} = \$3.13$$

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" x 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?

$$50 \times 6.99 \times 0.85 = \$297.08$$

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" x 12" or 1' x 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 x 4) is 16. In this example, 50 square feet could be represented by a 10' x 5' rectangle or a 25' x 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.

$$\begin{aligned} 100\% - 15\% &= 85\% \\ \$6.99 \times 0.85 &= \$5.94 \text{ a tile} \\ \text{Multiply to find the total cost.} \\ \$5.94 \times 50 &= \$297.00 \end{aligned}$$

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



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

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

SOLUTION...

Delete to reveal

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

$\frac{\$89.99 - \$76.49}{\$89.99} = 0.15$
 \$13.50
 15%

Rate of Discount

- is equal to...

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

ex: Reg. ⇒ \$299.00
 Sale Price ⇒ \$279.00
 What is the rate of discount?
 $\frac{299 - 279}{299} \times 100\% = 6.7\%$

SOLUTION...
 Delete to reveal

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

HP Pavilion Laptop
 AMD Turion™ 64 X2 Mobile Technology TL-44
 • 3 GB memory, 320 GB hard drive (160 x 2)
 • DVD Super Multi drive with HD DVD support
 • Wireless LAN, FireWire, HDMI
 • 256 MB NVIDIA GeForce 6400M GS graphics (DDR2, ZWTEXA)
 SAVE \$380
899.96
 256 MB DEDICATED VIDEO MEMORY!

$\frac{380}{1279.96} \times 100\%$
 30%

Simoniz® S1900 Electric Pressure Washer
 Sale: \$229.99
 Reg: \$349.99
 1/3 Off

$\frac{349.99 - 229.99}{349.99} \times 100\%$
 34.3%

SOLUTION...
 Delete to reveal

SOLUTION...
 Delete to reveal



166-piece socket set
 #58-9225-6

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

Rate = 70 %

$\frac{179.99 - 48.88}{179.99} \times 100\%$
 = 72.8 %

SOLUTION...
 Delete to reveal

and evenness
 Doritos
 WAS 3.79
2.99
 Doritos tortilla chips
 Tortitos or Ruffles potato chips
 selected varieties, 400-440 g

$\frac{3.79 - 2.99}{3.79} \times 100\%$
 = 21.1 %

Rate = 21 %

SOLUTION...
 Delete to reveal

HOMEWORK

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