Worksheet 3.2 Percent

2. 20% off means 80% remains

$\frac{\text{part}}{\text{whole}}$ $\frac{\text{sale price}}{\text{regular price}}$ $\frac{x}{129} = \frac{80}{100}$

$x = \frac{80}{100} \times 129$

$x = \$103.20$ ∴ the sale price is $\$103.20$

13% tax is a 13% price increase total is 113%

Find 113% of $\$103.20$ 103.20×1.13

$\doteq 116.62$

∴ the total cost is $\$116.62$.

3. 370% increase means 100% + 370% total

= 470% total

Find 470% of $\$400$

4.7×400

$= 1880$ ∴ Jane ended up with $\$1880$.

4. a) $\frac{52}{60} = \frac{x}{100}$ b) $\frac{113}{100} = 113\%$

$x = \frac{52}{60} \times 100$

$x \doteq 87\%$

5. 150% markup is 100% + 150% = 250% total.

Find 250% of $\$5.40$

2.5×5.40

$= \$13.50$

6. $\$54.99 - \$10$ 10% off means 90% remains Find 113% of $\$40.49$

$= \$44.99$ Find 90% of $\$44.99$ 1.13×40.49

0.90×44.99 $= \$45.75$

$= \$40.49$

7. Reduced by 70% means 30% remains.

$\frac{\text{part}}{\text{whole}}$ $\frac{276}{x} = \frac{30}{100}$

$x = \frac{276 \times 100}{30}$

$x = \$920$

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8. 60% reduction means 40% remains

part/whole $\quad \frac{356}{x} = \frac{40}{100}$

$40x = 35600$

$x = \frac{35600}{40}$

$x = 890$ ∴ the original cost was $890.

9. 70% reduction leaves 30%.

part/whole $\quad \frac{12}{x} = \frac{30}{100}$

$30x = 1200$

$x = 40$ ∴ the original cost was $40.

10. 30% reduction leaves 70% (100-30)

part/whole $\quad \frac{42}{x} = \frac{70}{100}$

$70x = 4200$

$x = 60$ ∴ the original cost was $60.

11. 60% reduction leaves 40%

part/whole $\quad \frac{x}{65} = \frac{40}{100}$

$x = \frac{40}{100} \times 65$

$x = 26$ ∴ the sale price was $26.

12. 13% taxes is a 13% increase 100% + 13% = 113%

113% of $26

$= 1.13 \times 26$

$= 29.38$ ∴ the total is $29.38

13. 67% increase is 167% of the cost.

167% of $1.20

$= 1.67 \times 1.20$

$\doteq \$2.00$ ∴ the will sell the chocolate bars for $2. each.

OR

$\frac{167}{100} = \frac{x}{1.20}$

$x = \frac{167}{100} \times 1.20$