

Assignment 8.4

24 pts

Use the information provided to find the new amount.

1. Wholesale price: \$34
Markup Percent: 125%

$$\begin{aligned}\text{Retail} &= \text{wholesale} + \text{markup} \\ &= 34 + (1.25 * 34) \\ &= 34 + 42.5 \\ &= \boxed{\$76.50}\end{aligned}$$

2. Wholesale Price: \$125
Markup Percent 50%

$$\begin{aligned}\text{Retail} &= \text{wholesale} + \text{markup} \\ &= 125 + (.5 * 125) \\ &= 125 + 62.50 \\ &= \boxed{\$187.50}\end{aligned}$$

3. Original Price: \$37
Discount Percent: 25%

$$\begin{aligned}\text{Sale} &= \text{original} - \text{discount} \\ &= 37 - (.25 * 37) \\ &= 37 - 9.25 \\ &= \boxed{\$27.75}\end{aligned}$$

4. Original Price: \$54
Discount Percent: 40%

$$\begin{aligned}\text{Sale} &= \text{Original} - \text{discount} \\ &= 54 - (.4 * 54) \\ &= 54 - 21.60 \\ &= \boxed{\$32.40}\end{aligned}$$

5. Original Price: \$42
Sales Tax: 5%

$$\begin{aligned}\text{Total} &= \text{original} + \text{tax} \\ &= 42 + (.05 * 42) \\ &= 42 + 2.10 \\ &= \boxed{\$44.10}\end{aligned}$$

6. Original Price: \$78
Sales Tax: 6%

$$\begin{aligned}\text{Total} &= \text{original} + \text{tax} \\ &= 78 + (.06 * 78) \\ &= 78 + 4.68 \\ &= \boxed{\$82.68}\end{aligned}$$

7. Food Bill: \$25
Sales Tax: 6%
Tip: 15%

$$\begin{aligned}\text{Total} &= \text{Food} + \text{tax} + \text{tip} \\ &= 25 + (.06 * 25) + (.15 * 25) \\ &= 25 + 1.50 + 3.75 \\ &= \boxed{\$30.25}\end{aligned}$$

8. Food Bill: \$18
Sales Tax: 5%
Tip: 20%

$$\begin{aligned}\text{Total} &= \text{Food} + \text{tax} + \text{tip} \\ &= 18 + (.05 * 18) + (.2 * 18) \\ &= 18 + .9 + 3.60 \\ &= \boxed{\$22.50}\end{aligned}$$

9. Retail Price: \$50
Markup Percent: 90%

$$\text{Retail} = \text{Wholesale} + \text{markup}$$

$$50 = x + .9x$$

$$50 = 1.9x$$

$$\boxed{\$26.32 = x}$$

10. Retail Price: \$24
Markup Percent: 115%

$$\text{Retail} = \text{Wholesale} + \text{markup}$$

$$24 = x + 1.15x$$

$$24 = 2.15x$$

$$\boxed{\$11.16 = x}$$

11. Sale Price: \$150
Discount Percent: 25%

$$\text{Sale} = \text{original} - \text{discount}$$

$$150 = x - .25x$$

$$150 = .75x$$

$$\boxed{\$200 = x}$$

12. Sale Price: \$210
Discount Percent: 30%

$$\text{Sale} = \text{original} - \text{discount}$$

$$210 = x - .3x$$

$$210 = .7x$$

$$\boxed{\$300 = x}$$