

Dr. Woods  
Mathematics For Retailing  
Assignment 2: Yinghe Zhao

1. a.  $42 = \underline{\quad 10 \quad} \% \text{ of } 420$  ( $42/420 = 0.1 = 10\%$ )  
b.  $\frac{1}{2} \% \text{ of } \$250.50 = \underline{\quad \$1.25 \quad}$ . ( $\frac{1}{2} \% = 0.5\% = 0.005$ ,  $0.005 \times \$250.50 = \$1.2525$ )  
c.  $\$313.65 = 25.5\% \text{ of } \underline{\quad \$1,230 \quad}$  ( $25.5\% = 0.255$ ,  $\$313.65 / 0.255 = \$1,230$ )  
d.  $6.6\% \text{ of } \underline{\quad \$125 \quad} = \$8.25$  ( $6.6\% = 0.066$ ,  $\$8.25 / 0.066 = \$125$ )  
e.  $75 = \underline{\quad 75.01 \quad} \% \text{ of } 99.99$  ( $75/99.99 = 0.75007501 = 75.01\%$ )  
f.  $5.5\% \text{ of } \$2,020.40 = \underline{\quad \$111.12 \quad}$

( $5.5\% = 0.055$ ,  $0.055 \times \$2,020.40 = \$111.122 \approx \$111.12$ )

- g.  $12.5 = \underline{\quad 0.5 \text{ or } \frac{1}{2} \quad} \% \text{ of } 2,500$  ( $12.5/2,500 = 0.005 = 0.5\% \text{ or } \frac{1}{2}\%$ )  
h.  $\$13.50 = 6.75\% \text{ of } \underline{\quad \$200 \quad}$  ( $6.75\% = 0.0675$ ,  $\$13.50 \times 0.0675 = \$200$ )  
i.  $55 \frac{1}{2} \% \text{ of } \$440.50 = \underline{\quad \$244.48 \quad}$   
( $55 \frac{1}{2} \% = 111/2 \% = 55.5\% = 0.555$ ,  $0.555 \times \$440.50 = \$244.4775 \approx \$244.48$ )

- j.  $2 = \underline{\quad 0.05 \quad} \% \text{ of } 4,200$   
( $2/4,200 = 0.00047617 = 0.05\%$ )

2. Children's undershirts were selling for \$1.49 each. If  $8 \frac{1}{2}$  dozen shirts were sold, what was the retail value of total sales?

12 units = 1 dozen

$8 \frac{1}{2} \text{ dozen} = 17/2 = 8.5 \text{ dozens}$      $8.5 \times 12 = 102 \text{ units}$

$\$1.49 \times 102 = \$151.98$

The retail value of the total sales was \$151.98

3. Last month, 340 area rugs were sold in the furniture department. This month's sales for area rugs declined by 35%. How many rugs were sold this month?

$100\% - 35\% = 65\%$

$65\% = 0.65$

$340 \times 0.65 = 221$

221 rugs were sold this month.

4. A customer ordered the following fabrics:

24  $\frac{3}{4}$  yards at \$52.00 yard

52  $\frac{1}{2}$  yards at \$24.00 yard

12  $\frac{1}{4}$  yards at \$16.00 yard

What was the total dollar amount purchased?

$$24 \frac{3}{4} = \frac{99}{4} = 24.75 \quad 24.75 \times \$52.00 = \$1,287.00$$

$$52 \frac{1}{2} = \frac{105}{2} = 52.5 \quad 52.5 \times \$24.00 = \$1,260.00$$

$$12 \frac{1}{4} = \frac{49}{4} = 12.25 \quad 12.25 \times \$16.00 = \$196.00$$

$$\$1,287.00 + \$1,260.00 + \$196.00 = \$2,743.00$$

The total dollar amount purchased was \$2,743.00.

5. The men's department received a shipment of 16  $\frac{1}{3}$  dozen knit shirts, 20  $\frac{1}{4}$  dozen dress shirts, and 11  $\frac{1}{2}$  dozen pullover shirts. How many shirts (units) were received?

12 units = 1 dozen

$$16 \frac{1}{3} = \frac{37}{3} = 12.33333 \quad 12.33333 \times 12 = 196 \text{ units}$$

$$20 \frac{1}{4} = \frac{81}{4} = 20.25 \quad 20.25 \times 12 = 243 \text{ units}$$

$$11 \frac{1}{2} = \frac{23}{2} = 11.5 \quad 11.5 \times 12 = 138 \text{ units}$$

$$196 \text{ units} + 243 \text{ units} + 138 \text{ units} = 577 \text{ units}$$

577 shirts (units) were received.

6. A shipment of 26  $\frac{3}{4}$  dozen wine glasses was sent to a store. The receiving department discovered that 2  $\frac{1}{2}$  dozen glasses were cracked. If the damaged glasses were returned to the vendor, what was the percentage returned?

$$26 \frac{3}{4} = \frac{107}{4} = 26.75 \quad 26.75 \times 12 = 321 \text{ units}$$

$$2 \frac{1}{2} = \frac{5}{2} = 2.5 \quad 2.5 \times 12 = 30 \text{ units}$$

$$\frac{30}{321} = 0.0934579 \approx 9.35\%$$

9.35% were returned.