

**C: Percent of a Number Continued****Word Problems**Remember to change percents to decimals, ( $\div 100$ )

Remember "of" means multiply!

Examples:

1. 400 tickets are sold for a concert. At the door one person's ticket will be selected to meet the artist.

a. What is your chance of meeting the artist? Express your answer as a percent.

$$= \frac{1}{400}$$

$$= .0025$$

$$= 0.0025 \times 100 \%$$

$$= 0.25\%$$

I would have 0.25% of meeting the artist.

b. How many tickets would you need to purchase to have a 20% chance of meeting the artist?

20% of tickets sold?

20% of 400 is

$$= 0.20 \times 400$$

$$= 80$$

$$20\% \div 100$$

I would need to buy 80 tickets to have a 20% chance of meeting the artist.

2. A close star in space is 260% as far from the Earth as the Sun is. The sun is 149,669,180 km. What is the distance from the Earth to the close star?

260% of the Earth to the Sun

260% of 149,669,180 km is

$$= 2.6 \times 149,669,180$$

$$= 389,139,868 \text{ km}$$

$$260\% \div 100$$

The close star is 389,139,868 km from Earth.

3. The area of a lake is approximately 6238 km<sup>2</sup>. The area of a pond is about  $8\frac{3}{4}$  % of the area of the lake. What is the area of the pond to the nearest square kilometer? 4

 $8\frac{3}{4}$  % of the lake

4

8.75% of 6238 km<sup>2</sup>

$$= 0.0875 \times 6238$$

$$= 545.825$$

$$= 546 \text{ km}^2$$

$$3 \div 4$$

$$8.75\% \div 100$$

Round to nearest km, (whole number)

The area of the pond is 546 km<sup>2</sup>.

4. Suppose a car salesperson receives 3% commission on the first \$38 000 of a vehicle's selling price and 4% on the remaining amount. If an SUV sells for \$42 599, how much does the car salesperson make?

1<sup>st</sup> 38 000

3% of \$38 000                      3% ÷ 100

$0.03 \times \$38\,000$

\$1140

Amount above \$38 000

$\$42\,599 - \$38\,000$

\$4599

4% of \$4599                      4% ÷ 100

$0.04 \times \$4599$

\$183.96

Total Amount = \$1140 + \$183.96

= \$1323.96

The car salesperson makes \$1323.96 by selling the SUV.

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