

# Assignment 1.1

Solve each problem.

1) 66 is what percent of 133?

$$\frac{66}{133} = \frac{x}{133}$$

100x  $0.496 = x$   
 $49.6\%$

3) 132 is what percent of 81?

$$\frac{132}{81} = \frac{x}{81}$$

$1.63 = x$   
 $> 100$   $163\%$

5) What is 94% of 142?

$$x = \frac{94}{100} \times 142$$

$$x = 0.94 \times 142$$

$$x = 133.6$$

7) What is 199% of 37?

$$x = \frac{199}{100} \times 37$$

$$x = 1.99 \times 37$$

$$x = 73.63$$

9) 92% of what is 123?

$$\frac{92}{100} \times x = 123$$

$$0.92 \times x = 123$$

$$\frac{0.92 \times x}{0.92} = \frac{123}{0.92}$$

$$x = 133.7$$

Solve each proportion.

11)  $\frac{m}{8} = \frac{10}{4} \times 8$

$$m = \frac{80}{4}$$

$$m = 20$$

13)  $\frac{2}{k} = \frac{8}{9}$  Flip both sides  $\frac{k}{2} = \frac{9}{8} \times 2$

$$k = \frac{18}{8}$$

$$k = 2.25$$

2) 43 is what percent of 160?

$$\frac{43}{160} = \frac{x}{160}$$

$$0.269 = x$$

$$\times 100$$

$$26.9\% = x$$

4) 1 is what percent of 142?

$$\frac{1}{142} = \frac{x}{142}$$

$0.007 = x$   
 $\times 100$   
 $0.7\% = x$

6) 350% of 58.2 is what?

$$\frac{350}{100} \times 58.2 = x$$

$$3.50 \times 58.2 = x$$

$$203.7 = x$$

8) 8% of 96 is what?

$$\frac{8}{100} \times 96 = x$$

$$0.08 \times 96 = x$$

$$7.68 = x$$

10) 290% of what is 61?

$$\frac{290}{100} \times x = 61$$

$$2.90 \times x = 61$$

$$\frac{2.90 \times x}{2.90} = \frac{61}{2.90}$$

$$x = 21$$

12)  $\frac{9}{2} = \frac{v}{8} \times 8$

$$\frac{72}{2} = v$$

$$36 = v$$

14)  $\frac{2k}{4} = \frac{7}{10} \times 4$

$$2k = \frac{28}{10}$$

$$\frac{2k}{2} = \frac{2.8}{2}$$

$$k = 1.4$$

$$10 \times \frac{n-2}{10} = \frac{8}{6} \times 10$$

$$n-2 = \frac{80}{6}$$

$$n-2 = 13.3\bar{3}$$

$$n = 15.3\bar{3}$$

$$30 \times \frac{8}{20} = \frac{4x-8}{30} \times 30$$

$$\frac{240}{20} = 4x-8$$

$$\frac{120}{+8} = \frac{4x-8}{+8}$$

$$\frac{20}{4} = \frac{4x}{4}$$

$$5 = x$$

- 19) 8 bottles of water cost \$1.99. Determine the cost per bottle.

$$\frac{\text{COST PER BOTTLE}}{\text{BOTTLE}} = \frac{\text{COST}}{\text{BOTTLE}} = \frac{1.99}{8} = \boxed{\$0.25}$$

$$3 \times \frac{2}{10} = \frac{v+8}{3} \times 3$$

$$\frac{6}{10} = v+8$$

$$0.6 = v+8$$

$$\boxed{7.4 = v}$$

$$18) \frac{17}{29} = \frac{48}{\frac{x}{7} + 5}$$

FLIP: (both)

$$\frac{29}{17} = \frac{x+5}{48} \times 48$$

$$\frac{1392}{17} = \frac{x}{7} + 5$$

$$81.88 = \frac{x}{7} + 5$$

$$76.88 = \frac{x}{7} \times 7$$

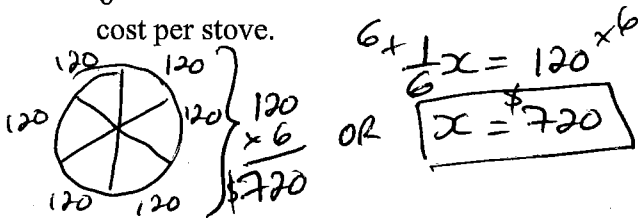
$$\boxed{538.18 = x}$$

- 20) 15 ponies cost \$52.50. Determine the cost per pony.

$$\frac{\text{COST PER PONY}}{\text{PONY}} = \frac{\text{COST}}{\text{PONY}} = \frac{52.50}{15} = \boxed{\$3.50}$$

SEEMS CHEAP.

- 21)  $\frac{1}{6}$  of a stove costs \$120. Determine the cost per stove.



- 22) 5 kgs of coffee rice costs \$13.75. Determine the cost per pound. (1kg = 2.2 pounds)

$$\frac{\text{COST}}{\text{lb}} = \frac{13.75}{5 \text{ kg}}$$

$$\$2.75 \text{ per kg}$$

$$\div 2.2$$

$$\boxed{\$1.25 \text{ per lb}}$$

- 23) A worker can plant 24 trees in 10 minutes. How long will it take to plant 84 trees?

ASKING TIME  $\rightarrow$  TIME GOES ON TOP

$$\frac{x}{\#} \rightarrow \frac{84 \times 10}{24} = \frac{x}{84} \times 84$$

$$\frac{840}{24} = x$$

$$\boxed{35 = x}$$

- 25) Jimmy drives 340km in 8 hours. How far does he drive in 12 hours?

ASKING DISTANCE  $\frac{d}{x} \rightarrow \frac{340}{8} = \frac{x}{12} \times 12$

$$\frac{4080}{8} = x$$

$$\boxed{510 \text{ km} = x}$$

- 24) A store sells 6 toasters and makes a profit of \$50. How much profit would they make if they sell 40 toasters?

ASKING \$  $\frac{\$}{\text{toaster}} \rightarrow \frac{50}{6} = \frac{x}{40} \times 40$

$$\frac{2000}{6} = x$$

$$\boxed{\$333.3 = x}$$

- 26) Jimmy drives 840km in 6 hours. How long does it take him to drive 35km?

ASKING TIME  $\rightarrow \frac{x}{d} \rightarrow \frac{6}{840} = \frac{x}{35} \times 35$

$$\frac{210}{840} = x$$

$$0.25 \text{ h} = x = \boxed{15 \text{ MIN}}$$

27) A store buys a bed for \$200 and marks it up 25%. Determine the selling price. *ADD IT IN*

*only markup*  
 $200 \times 0.25 = 50$   
 $200 + 50 = 250$   
 $200 \times 1.25 = 250$   
**\$250**

28) A store buys a frog for \$1.20 and marks it up 350%. Determine the selling price.

$1.20 \times 3.50 = 4.20$   
**\$4.20**

29) A store buys a donkey for \$600 and sells it for \$720. Determine the percent mark up.

$\frac{720}{600} = 1.20$   
**20% markup**

30) A store buys a toothpick for \$2.30 and sells it for \$2.99. Determine the percent mark up.

$\frac{2.99}{2.30} = 1.30$   
**30% markup**

31) A store sells a door for \$140 plus GST (5%). Determine the price, including tax.

$140 \times 1.05 = 147$   
 $140 \times 0.05 = 7$   
 $140 + 7 = 147$   
**\$147**

32) A store sells a record for \$350 plus GST (5%) and PST (7%). Determine the price, including tax. *ADD IT IN*

$350 \times 1.12 = 392$   
 $\frac{350 \times 0.12}{100} = 4.20$   
 $392 + 4.20 = 396.20$   
**\$396.20**  
*JUST TAX*

33) A store sells a dress for \$85 at the regular price. They offer a 10% discount. Determine the sale price.

$85 \times 0.90 = 76.50$   
 $85 - \frac{10}{100} \times 85 = 76.50$   
**\$76.50**

34) A store sells a collectable Darth Vader for \$65 at the regular price. They offer a 60% discount. Determine the sale price.

*OMG! DARTH VADER! SWEET!*  
 $65 \times 0.40 = 26$   
 $65 - \frac{60}{100} \times 65 = 26$   
**\$26**

*0.90, not 1.90, BECAUSE WE ARE NOT ADDING IT IN. I'm picking it up today.*

35) A store is having a BOGO (buy one get one half off) sale. A customer buys 2 products that cost \$80 and \$60. Determine the total cost for the 2 items.

*most \$ is full price*

$80 + \frac{60}{2} = 110$   
**\$110**

36) A store offers its members a 30% discount. A membership costs \$50 per year. A customer determines that she spends \$500 at the store every year. How much will she save? Is it a good idea to get the membership?

*Calculating price NOT discount*  
 $500 \times 0.70 = 350$   
 $500 - 350 = 150$   
 $150 - 50 \text{ fee} = 100$   
**SHE SAVES \$100 ITS WORTH IT.**

- 37) A store sells a blender for \$90 regular price. It is on sale for \$18. Determine the percent discount.

$$\frac{18}{90} = 0.20 \times 100 = 20\%$$

100%  
- 20%  
80% Discount

- 38) A store sells a pure bred, champion hamster for \$180 at the regular price. It is on sale for \$160. Determine the percent discount.

$$\frac{160}{180} = 0.89 \times 100 = 89\%$$

100%  
- 89%  
11% Discount

- 39) Convert \$100 (Can) into American Dollars

$$100 \times 0.803 = \$80.3$$

- 40) Convert \$100 (Can) into British Pounds

$$100 \times 0.522 = 52.2$$

- 41) Convert 300 Pesos into Canadian Dollars.

$$300 \times 0.084 = \$25$$

- 42) Convert 300 Pesos into Euros.

$$300 \times 0.059 = 17.7$$

- 43) William has 50 British Pounds. Guillome has 1100 Pesos. Who has more money and by how much? Give your answer in Canadian Dollars.

POUNDS

$$50 \times 1.916 = \$95.80$$

PESOS

$$1100 \times 0.084 = \$92.40$$

$$\begin{array}{r} 95.80 \\ - 92.40 \\ \hline 3.40 \end{array}$$

WILLIAM HAS \$3.40 MORE THAN Guillome

- 44) Jimmy can buy a computer online from a Canadian retailer for \$800, plus GST (5%), and \$40 shipping (no GST on shipping). He can buy the same computer from an American retailer for \$650 (US), plus \$90 (US) shipping. Which computer is cheaper and by how much? Give your answer in Canadian dollars.

CDN COMPUTER x GST + SHIPPING

$$800 \times 1.05 + 40$$

$$840 + 40$$

$$\$880$$

THE CANADIAN COMPUTER IS CHEAPER BY \$41.30

$$\begin{array}{r} 921.30 \\ - 880.00 \\ \hline 41.30 \end{array}$$

US Comp + SHIPPING

US Comp x EXCHANGE + SHIPPING

$$650 \times 1.245 + 90 \times 1.245$$

$$809.25 + 112.05$$

$$\leftarrow \$921.30$$