

6. Organize the prices below from lowest to highest unit rate.

355 mL of pop	\$0.44
2 L of pop	\$1.39
1 L of pop	\$0.64

7. One type of fabric costs \$8.78 for 1 m of fabric and another costs \$42.25 for 5 m of fabric. Which fabric has the lower cost per metre?
8. The retail price of a refrigerator is \$1719.00. Calculate the PST, the GST, and the final price if the refrigerator is sold in Manitoba.

Tax Rates		
	PST	GST
Alberta	0%	5%
British Columbia	HST 12%	
Manitoba	7%	5%
Northwest Territories	0%	5%
Nunavut	0%	5%
Saskatchewan	5%	5%
Yukon	0%	5%

9. Use the following chart to calculate the cost of buying 2 T-shirts, 2 pairs of shoes, and 4 pairs of jeans.

Clothing Article	Wholesale Price	Markup
T-Shirt	\$17.50	15%
Shoes	\$77.50	65%
Jeans	\$45.00	30%

10. The cost of a new sledge hammer is \$42.99. It is on sale for \$32.24. What is the discount, as a percent?

11. The cost of purchasing ceiling fans at a wholesaler depends on the number you buy:

If you buy fewer than 5 fans, they cost the regular price of \$179.99 each.

If you buy 6 to 10 fans, you receive 7% off.

If you buy 11 to 20 fans, you get 19% off.

Calculate the price of buying 3 ceiling fans in Manitoba, where 7% PST and 5% GST are applied.

12. Pablo is visiting Canada from Mexico. He is renting a hotel room for 4 nights in Vancouver. The cost of the hotel room is \$75.00 CAD per night. Pablo exchanges his pesos for Canadian dollars at a bank in Canada. The bank buys pesos at \$0.19779 CAD and sells pesos at \$0.08087 CAD. How much will the hotel cost him, in pesos?

Problem

1. The Grow In is a local organic food store. The store buys berries from local farmers for \$3.49/L and marks up the price by 50%.

If the farmers increase their price to \$4.19/L but the store uses the same markup rate, what will be the retail price of the berries?

Math 10w CHAPTER 1 REVIEW

Answer Section

MULTIPLE CHOICE

1. C
2. B
3. A
4. D
5. D
6. B
7. A
8. A
9. A
10. A
11. D
12. C
13. B
14. B
15. A
16. D
17. A
18. A
19. C
20. D

SHORT ANSWER

1. Write Grant's weight to Greg's weight as a proportion

$$\frac{6}{7} = \frac{\text{Grant's weight}}{115 \text{ kg}}$$

$$115 \times \frac{6}{7} = \frac{\text{Grant's weight}}{115 \text{ kg}} \times 115$$

$$115 \times \frac{6}{7} = \text{Grant's weight}$$

$$98.57 = \text{Grant's weight}$$

Grant weighs 98.57 kg.

2. Set up a proportion to solve for x , the height of the TV.

$$\frac{27}{x} = \frac{16}{9}$$

$$9 \times x \times \frac{27}{x} = \frac{16}{9} \times x \times 9$$

$$9 \times 27 = 16x$$

$$\frac{9 \times 27}{16} = x$$

$$15.19 = x$$

The TV will be 15.19 inches high.

3. Set up a proportion to solve for x , the width of the monitor.

$$\frac{4}{3} = \frac{x}{24}$$

$$24 \times \frac{4}{3} = \frac{x}{24} \times 24$$

$$24 \times \frac{4}{3} = x$$

$$32 = x$$

The computer monitor will be 32 inches wide.

4. One pen costs \$0.26.
 5. Wages are \$23.44 per hour.
 6. Calculate the unit prices.

355 mL of pop:	$0.44 \div 355 = \$0.001239/\text{mL}$
2 L of pop:	$1.39 \div 2000 = \$0.000695/\text{mL}$
1 L of pop:	$0.645 \div 1000 = \$0.000645/\text{mL}$

Lowest to highest in unit rate:

1 L of pop
 2 L of pop
 355 mL of pop

7. Convert the second fabric to a unit price.

$$\frac{\$42.25}{5} = \$8.45/\text{m}$$

The second fabric costs less per metre.

8. Convert 7% to a decimal.

$$7 \div 100 = 0.07$$

Calculate how much PST you will pay.

$$\$1719.00 \times 0.07 = \$120.33$$

The PST is \$120.33.

Convert 5% to a decimal.

$$5 \div 100 = 0.05$$

Calculate how much GST you will pay.

$$\$1719.00 \times 0.05 = \$85.95$$

The GST is \$85.95.

Calculate the price including tax.

$$\$1719.00 + \$85.95 + \$120.33 = \$1925.28$$

The cost of the new refrigerator with PST and GST is \$1925.28.

9. Calculate the retail price per unit for each clothing item.

T-shirts:

Find 15% of \$17.50.
 $0.15 \times \$17.50 = \2.62

Retail price:
 $\$17.50 + \$2.62 = \$20.12$

One T-Shirt will cost \$20.12.

Shoes:

Find 65% of \$77.50.
 $0.65 \times \$77.50 = \50.38

Retail price:
 $\$77.50 + \$50.38 = \$127.88$

One pair of shoes will cost \$127.88.

Jeans:

Find 30% of \$45.00.
 $0.30 \times \$45.00 = \13.50

Retail price:
 $\$45.00 + \$13.50 = \$58.50$

One pair of jeans will cost \$58.50.

Calculate the total bill.

$$(2 \times \$20.12) + (2 \times \$127.88) + (4 \times \$58.50) = \$530.00$$

The cost will be \$530.00.

10. Calculate the dollar amount of the discount.

$$\$42.99 - \$32.24 = \$10.75$$

Calculate what percentage \$10.75 is of \$42.99.

$$\$10.75 \div \$42.99 \times 100 = 25$$

The sledge hammer has been reduced in price by 25%.

11. You will be charged the regular price on the ceiling fans.

$$\text{cost} = (3 \times \$179.99) \times 1.12$$

$$\text{cost} = \$604.77$$

Buying the fans will cost \$604.77.

12. Calculate the cost of the hotel in CAD.
 $\$75.00 \text{ CAD/night} \times 4 \text{ nights} = \300.00

The bank is buying the pesos from Pablo, so use the buying rate.
 $\$300.00 \div 0.19779 = 1517 \text{ pesos}$

The hotel will cost Pablo 1517 pesos.

PROBLEM

1. Calculate the retail price of the berries.
new retail price = increased wholesale price \times (1 + markup as a decimal)
new retail price = $\$4.19 \times (1 + 0.50)$
new retail price = $\$6.29/\text{L}$

The new retail price will be $\$6.29/\text{L}$.