

# 8.60 - Questions Handout #s 1 - 22

## Key Words

For questions 1 to 6, match each definition to one of these words:

commission	discount	principal
proportion	rate	ratio
sales taxes	simple interest	speed
unit price	unit rate	

1. a comparison of quantities measured in different units
2. a statement that two ratios are equal
3. the price of one unit, used in shopping
4. an amount subtracted from a listed price to give a sale price
5. money collected by the government on purchases
6. a payment, expressed as a percent, earned on sales

## 5.1 Apply Ratio and Proportion, pages 150–155

7. Write a ratio, in simplest form, to compare the number of buttons of each colour.



- a) green to blue
- b) green to yellow

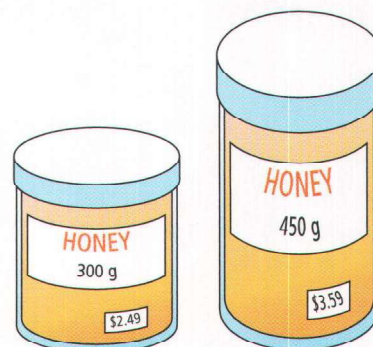
8. Find the missing number in each proportion.

- a)  $12:8 = 6:\blacksquare$
- b)  $3:\blacksquare = 12:20$
- c)  $7:2 = \blacksquare:10$

9. A baseball team has a win-loss record of 30:25.
  - a) Write this as a ratio in simplest form.
  - b) Predict the team's final record at the end of a 165-game season. What assumption do you need to make?

## 5.2 Explore Rates, pages 156–161

10. Write each as a unit rate.
  - a) Sonya walked 500 m in 5 min.
  - b) It costs 99¢ for 3 lemons.
  - c) Jordan typed 150 words in 6 min.
11. It costs \$2.45 for 500 mL of soy sauce.
  - a) Express this as a unit price per 100 mL.
  - b) How much would 1.5 L of soy sauce cost?
12. Julie drove 150 km in 2 h, at a fairly constant speed.
  - a) Express this as a unit rate.
  - b) At this rate, how far will Julie travel in 5 h?
  - c) Describe any assumptions you must make.
13. Which is the better buy? Justify your choice.



### 5.3 Apply Percent to Sales Taxes and Discounts, pages 162–165

14. Find the 7% GST and the 8% PST on each item.

	Item	Price
a)	Sweater	\$28.95
b)	Bracelet	\$10.99
c)	Camera	\$239.00

15. Estimate, then calculate, each discount.
- 30% off a picture frame, regular price \$15.95
  - 25% off a filing cabinet, regular price \$59.85
  - 20% off a magazine subscription, regular price \$28.00
16. The regular price of a knapsack is \$39.95. Now, it is marked down by 25%. It is subject to both 7% GST and 8% PST.
- Estimate the final price.
  - Calculate the discount and the sale price.
  - Calculate the total sales tax and the final price.
  - Compare the final price to your estimate. How close were you?
17. The regular price of a snowboard is \$349. Now, it is marked at 35% off.
- What is the sale price?
  - Find the total price, including 7% GST and 8% PST.



### 5.4 Apply Percent to Commission, pages 166–169

18. Tomka earns 40% commission on the make-up that she sells. How much will she earn on each sale?



eye shadow \$7.50    nail polish \$4.59    lipstick \$5.95    mascara \$5.95

- 1 eye shadow
  - 2 lipsticks
- 1 mascara, 3 nail polishes, and 2 eye shadows
19. Aria earns a 3% commission on real estate sales.
- What is her commission if she sells a house for \$150 000?
  - Aria receives a commission cheque for a house sale. The cheque is for \$6000. What was the selling price of the house?

### 5.5 Calculate Simple Interest, pages 170–173

20. Ian deposits \$700 into an account that earns 6% interest per year.
- How much interest is earned in 5 years?
  - What is the total amount after 5 years?
21. Suhanna borrows \$350 for 18 months at a rate of  $8\frac{1}{2}\%$  interest per year. What total amount must she pay when the loan is due?
22. \$1000 is deposited into an account for 3 months. The account earns  $5\frac{1}{4}\%$  interest per year. How much interest is earned?