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.

8. Find the missing number in each proportion.
   a) \[12.8 = 6: \_\]
   b) \[3: \_ = 12:20\]
   c) \[7:2 = \_ : 10\]

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Sweater</td>
<td>$28.95</td>
</tr>
<tr>
<td>b) Bracelet</td>
<td>$10.99</td>
</tr>
<tr>
<td>c) Camera</td>
<td>$239.00</td>
</tr>
</tbody>
</table>

15. Estimate, then calculate, each discount.
   a) 30% off a picture frame, regular price $15.95
   b) 25% off a filing cabinet, regular price $59.85
   c) 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.
   a) Estimate the final price.
   b) Calculate the discount and the sale price.
   c) Calculate the total sales tax and the final price.
   d) 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.
   a) What is the sale price?
   b) 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?

19. Aria earns a 3% commission on real estate sales.
   a) What is her commission if she sells a house for $150 000?
   b) 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.
   a) How much interest is earned in 5 years?
   b) What is the total amount after 5 years?

21. Sulaima 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?