

4.3 Percent of a Number

Pg 142 Q# 5, 6, 8-10, 13b, 15, 16

Check Your Understanding

Practise

For help with #3 and #4, refer to Example 1 on pages 139–140.

3. Use mental math to determine each of the following.
 - a) 300% of 2000
 - b) $1\frac{1}{4}\%$ of 60
 - c) 0.1% of 40

4. Use mental math to find the following.
 - a) 20% of 60
 - b) 250% of 400
 - c) $10\frac{1}{2}\%$ of 100

For help with #5 and #6, refer to Example 2 on pages 140–141.

5. Determine the percent of each number. Give your answer to the nearest hundredth.
 - a) $\frac{2}{5}\%$ of 325
 - b) $15\frac{1}{4}\%$ of 950
 - c) 175% of \$125.50

6. What is the percent of each number? Give your answer to the nearest hundredth.
 - a) $\frac{5}{8}\%$ of 520
 - b) $75\frac{2}{5}\%$ of 200
 - c) 250% of \$76.50

Apply

7. Two hundred tickets are being sold for a school draw.
 - a) What is your chance of winning with one ticket? Express your answer as a percent.
 - b) How many tickets would you need to purchase to have a 2.5% chance of winning?

8. The original price of a jacket was \$84.00. A store manager marked the price down by $25\frac{1}{2}\%$. By how much was the price reduced?

9. The highest point in Canada is Mount Logan, which is in the Yukon Territory. Mount Logan is 159% as high as the highest point in Alberta, Mount Columbia. The elevation of Mount Columbia is 3747 m. What is the elevation of Mount Logan?



10. When water freezes, its volume increases by approximately 10%.
 - a) By how much does the volume of 750 mL of water increase when it freezes?
 - b) What is the volume of ice created?

11. The area of Canada is approximately 9 984 670 km². The area of Manitoba is about $6\frac{1}{2}\%$ of the area of Canada. What is the area of Manitoba to the nearest square kilometre?
12. A manufacturer of electric hybrid vehicles claims its vehicle will travel 200% as far as its regular vehicle on a full tank of gas. If the regular vehicle travels an average of 550 km on a full tank, how far will the hybrid go?



13. Suppose a real estate agent receives 5% commission on the first \$200 000 of a house's selling price, and 6% on the remaining amount.
- What does *commission* mean?
 - If a house sells for \$345 000, how much commission does the real estate agent make on the sale of the house?

Extend

14. 4% of 100 is the same as 8% of what number? Explain how you arrived at your answer.
15. A new video gaming system was auctioned on the Internet. The starting bid was \$100. The second bid was 135% of the first bid. The third bid was 257% of the second bid. There were then five more bids, each $10\frac{1}{2}\%$ over the previous bid. The winning bid came with only seconds left and was only 0.1% greater than the previous bid. What was the winning bid? What assumptions did you make to arrive at your answer?
16. Josephine scored 12 baskets out of 30 shots in her first basketball game this year. Her scoring average was then 40%. The next game, she made ten shots and raised her scoring average for both games to 50%. How many of the ten shots in the second game were baskets?

MATH LINK

Water conservation is very important to protect local fresh water supplies.

- Research at least three ways that your home, school, and community could reduce water consumption.
- Develop three water math problems that ask how much water you might save if you used some of these ways of conserving.

WWW Web Link

Did you know that a swimming pool cover can help reduce water loss by evaporation by 90%? To find data and tips on conserving water, go to www.mathlinks8.ca and follow the links.