

Word Problems with Equations

Lesson 17 Worksheet

Name _____

Date _____

Class _____

Section 1 — Skill Practice

Q1. For each problem, define a variable and write an equation.

- (a) A number increased by 8 gives 15. **1 mark**
- (b) Three times a number decreased by 4 equals 11. **1 mark**
- (c) The sum of two consecutive numbers is 35. **1 mark**
- (d) A rectangle's length is twice its width. The perimeter is 36 cm. **1 mark**

Q2. Write an equation for each situation. Do not solve.

- (a) A plumber charges \$60 call-out fee plus \$45 per hour. The total bill was \$240. **1 mark**
- (b) A class has 28 students. There are 4 more girls than boys. **1 mark**
- (c) A mobile phone plan costs \$30 per month plus \$0.10 per text. The monthly bill was \$42. **1 mark**

Section 2 — Problem Solving

Q3. A number is multiplied by 4, then 7 is subtracted. The result is 29. Find the number. **2 marks**

Q4. The sum of three consecutive odd numbers is 63. Find the numbers. **2 marks**

Q5. A rectangle has length 5 cm more than its width. The perimeter is 46 cm. Find the dimensions. **2 marks**

Q6. Two angles in a triangle are equal. The third angle is 30° more than each of the equal angles. Find all three angles. **2 marks**

Section 3 — Extended Response

Q7. A car rental company charges a flat fee of \$80 plus \$0.25 per kilometre. Another company charges \$50 plus \$0.40 per kilometre.

(a) Write an expression for the cost of hiring from each company for k kilometres. **1 mark**

(b) Write an equation to find when both companies charge the same amount. **1 mark**

(c) Solve the equation and interpret the result. **2 marks**

(d) Which company is cheaper for a 150 km trip? Show your working. **1 mark**

► **Answer Key**