

Chapter 4 Review

4.1 Solve Simple Equations, pages 186–195

1. Solve.
- a) $5y = 35$ b) $b - 8 = -12$
- c) $\frac{x}{4} = 7$ d) $h + 5 = 13$

2. Find each root.
- a) $8m + 9 = -15$
- b) $2p + 7 = 3$
- c) $5 - 4k = -7$
- d) $4 + 3c = -12$

3. Solve, then check.
- a) $-2a = -22$
- b) $3 - q = -5$
- c) $\frac{1}{2}g = -9$
- d) $7 - 6s = 19$

4. Greg is 42. He is 3 years older than Sue.
- a) Write an equation relating Sue and Greg's ages.
- b) How old is Sue?

4.2 Solve Multi-Step Equations, pages 196–203

5. Solve.
- a) $2m + 5m - 3 = 4$
- b) $4b - 6 + b - 9 = 0$
- c) $3x - x + 4 = 0$
- d) $2k + 3 = 4k - 5$

6. Find the root of each equation.
- a) $2 + (4h - 1) = 11 + 2h$
- b) $8 - (2g + 3) = 3g - 5$
- c) $2(d + 6) = 9(d - 1)$
- d) $5(3r - 7) + r = 3(r - 3)$

7. Find each root, then check.
- a) $4s + 3 - s = -6$
- b) $p - 3 + 2p - 9 = 0$
- c) $5 - (c + 3) = 4 + c$
- d) $3(4d - 7) - 6 = 2(d + 2) - 1$

8. The perimeter of an isosceles triangle is 21 cm. The length of each equal side is triple the length of the base. Find the side lengths of the triangle.

4.3 Solve Equations Involving Fractions, pages 204–210

9. Solve.
- a) $\frac{t-6}{2} = 4$
- b) $\frac{1}{3}(c + 2) = 1$
- c) $\frac{4a+1}{3} = -5$
- d) $\frac{2}{3}(s - 4) = 4$

10. Solve.
- a) $\frac{d+4}{2} = \frac{3d}{4}$
- b) $\frac{k-1}{2} = \frac{k+3}{4}$
- c) $\frac{2}{3}(q - 3) = \frac{1}{4}(q + 7)$
- d) $\frac{3c-1}{5} = \frac{4c+1}{9}$

4.4 Modelling With Formulas, pages 211–219

11. Rearrange each formula to isolate the variable indicated.
- a) $A = lw$ for l
- b) $P = 2a + 2b$ for b
- c) $y = mx$ for x
- d) $l = w + 4$ for w
- e) $P = 2a + b$ for b
- f) $S = 2\pi r(r + h)$ for h

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BLM 4.CR.1
(page 2)

4.5 Modelling With Algebra, pages 220–229

12. Write an equation for each phrase.
- a) 4 less than triple a number is 23
 - b) the sum of double a number and 6 is 16
 - c) half a number, less 3, is 8
 - d) the area decreased by 7 is 14
 - e) the sum of two consecutive integers is 49
 - f) the distance increased by 8 is 25
13. Together, Blackie and Jessie have a mass of 72 kg. Blackie's mass is 4 kg less than Jessie's mass. What is each dog's mass?
14. Chantal works at a music store. She earns \$8 per hour plus \$0.05 for each CD she sells. Tonight she is working a 5-h shift. How many CDs must Chantal sell to earn \$42?