

Chapter

8

ADDITIONAL PRACTICE EQUATIONS AND INEQUALITIES

Exercise 8A Algebraic Equations

1. Write these statements as equations.

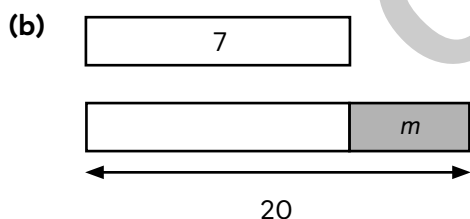
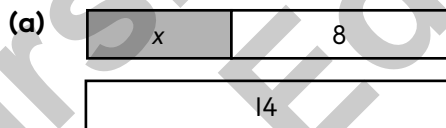
(a) The sum of k and 12 is 20

(b) The product of 5 and m is 35

(c) The quotient of $4y$ and 3 is 20

(d) 8 subtracted from $3w$ is equal to 7

2. Write two algebraic equations, one using addition and the other subtraction, to represent each diagram.



Exercise 8B Solve Algebraic Equations by Adding or Subtracting

I. Solve each equation.

(a) $a + 14 = 20$

(b) $b + 18 = 34$

(c) $p + 63 = 91$

(d) $k + 25 = 40$

(e) $s - 12 = 18$

(f) $h - 15 = 9$

(g) $y - 35 = 29$

(h) $k - 15 = 18$

2. Solve the following equations.

(a) $18m = 60$

(b) $15y = 58 - 13$

(c) $3.2k = 40$

(d) $2.4p = 36$

(e) $8h = 3\frac{1}{5}$

(f) $\frac{5}{6}v = \frac{3}{4}$

(g) $\frac{2}{3}z = 1\frac{4}{5}$

(h) $\frac{1}{2}b = 3\frac{7}{8}$

3. Celina has 80 stickers. She gives $4p$ stickers to her friend, and gives the remaining stickers equally to her 2 sisters. Each sister gets 30 stickers. Form an equation in terms of p and find the number of stickers Celina gives to her friend.
4. Mrs. Jones buys 7 T-shirts and 6 hats for \$86. The price of each T-shirt is \$3 more than each hat. How much does Mrs. Jones pay for a hat?
5. When 15 is added to twice a given number, the sum is 39. Find the given number.

Exercise 8J Simple Inequalities

1. Which of these numbers $\{-3, -1, 4, 5, 10, 18\}$ make the inequalities true?

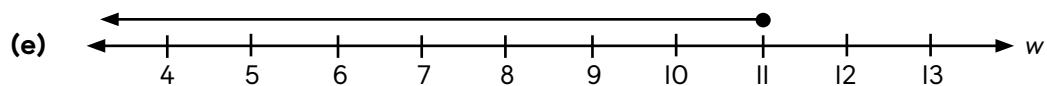
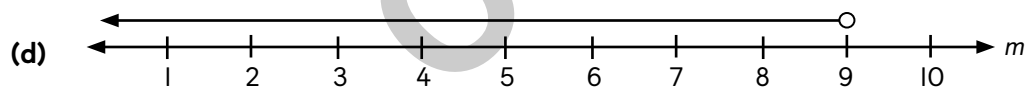
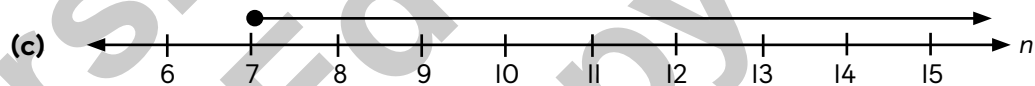
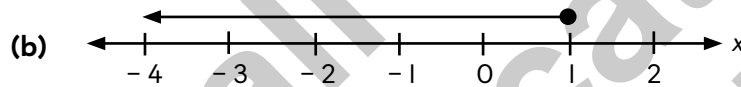
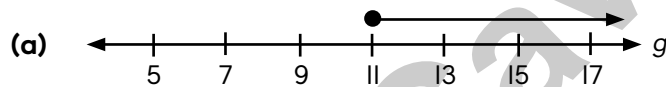
(a) $w < 5$

(b) $p \geq 10$

(c) $k > -1$

(d) $m \leq 7$

2. Write the inequality represented by each number line.



Chapter Practice

1. Which one of the values below will make the equation $20 + 2k - 11 = 23$ true?

- (A) 7 (B) 12
(C) 13 (D) 14

2. The table shows the length of Mila's ribbon (m) and Ava's ribbon (a).

Mila's Ribbon (feet)	2	3	4	5
Ava's Ribbon (feet)	7	9	11	13

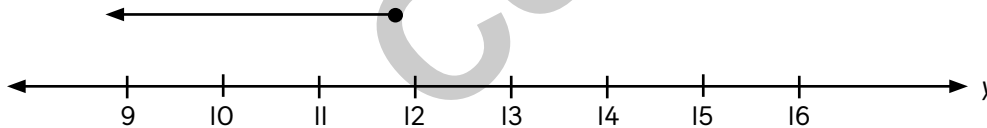
Which one of the following equations represents the relationship between Mila's ribbon and Ava's ribbon?

- (A) $a = m + 5$ (B) $a = 2m - 1$
(C) $a = 2m + 3$ (D) $a = 3m - 2$

3. The difference between two numbers is 120. One of the numbers is four times the other number. Which one of the following equations represents the relationship between the two numbers?

- (A) $y - 4y = 120$ (B) $y + 4y = 120$
(C) $4y = 120$ (D) $4y - y = 120$

4. Which one of the values below is a solution of $y \leq 12$?



- (A) 12 (B) 13
(C) 14 (D) 15

5. Which of the following is the solution of $3k \leq 18$?

- (A) $k \leq \frac{8}{3}$ (B) $k \geq \frac{8}{3}$
(C) $k \leq 6$ (D) $k \geq 6$