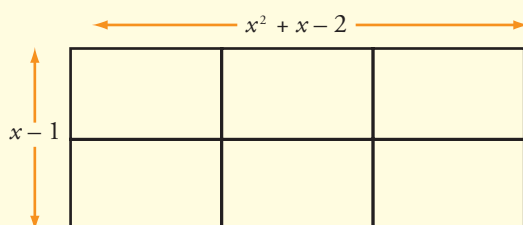


 chapter 9 review

1. (a) ✎ If $x = 3$, find the value of $x^2 - 2x + 6$.
- (b) (i) ✎ Multiply $(2x - 1)$ by $(x + 4)$.
- (ii) ✎ Simplify $5x^4y^3 \div x^2y^2$ and find its value when $x = -1$ and $y = 2$.
- (c) (i) ✎ Write $\frac{x+2}{3} - \frac{x-4}{5}$ as a single fraction.
Give your answer in its simplest form.
- (ii) ✎ Write $\frac{2x+4}{2} - \frac{x-3}{6} + 2$ as a single fraction.
Give your answer in its simplest form.
2. (a) ✎ If $a = 3$ and $b = 5$, find the value of each of the following:
- (i) $3a - 2b$
- (ii) $ab - 2$
- (b) (i) ✎ Write $(5x - 2y) - 2(x - y + 2)$ in its simplest form.
- (ii) Multiply $(x^2 + 3)$ by $(x - 4)$.
- (c) (i) ✎ A litre of milk cost m cent. Write an expression for the cost of $n + 3$ litres of milk.
- (ii) ✎ Find the total cost, if $n = 4$ and $m = 70$.
3. (a) ✎ If $a = 2$, $b = 5$ and $c = 2$, find the value of $\frac{-b - \sqrt{b^2 - 4ac}}{2a}$.
- (b) (i) ✎ Multiply $(x^2 + x - 2)$ by $(x - 1)$.
- (ii) ✎ Copy the diagram and use it to check your answer for part (i).



- (c) (i) ✎ Write $\frac{x-5}{4} - \frac{x-7}{3} + \frac{2}{3}$ as a single fraction.

Give your answer in its simplest form.

- (ii) ✎ If $x = a + 1$, write the answer to part (i) as an expression in a .

4. (a) Simplify $\frac{a^3 \times a^5}{a \times a^6}$, giving your answer in its simplest form.

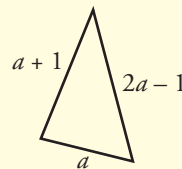
- (b) (i) ✎ Write $\frac{x}{2} + \frac{y}{3}$ in its simplest form.

- (ii) ✎ Multiply $5(x + 3)$ by $(3x - 2)$.

- (c) ✎ x is a number. A second number is 10 greater than x .

Write an expression for the product of these numbers.

5. (a) ✎ If $a = 2$, find the perimeter of the triangle opposite.



- (b) (i) ✎ Write $(x + 2)^2 + 3x - 2$ in its simplest form.

- (ii) ✎ Express $\frac{x+7}{3} - \frac{2x}{9}$ in its simplest form.

- (c) ✎ The perimeter of a rectangle is given by the expression $2l + 2b$.

- (i) Find the perimeter, when $l = \frac{1}{2}$ and $b = \frac{1}{3}$.

- (ii) What is the area of the rectangle?

6. (a) ✎ Simplify $3(x^2 + 2x + 2) - x^2(x - 2) - (3x + 1)$.

- (b) ✎ The four sections of the diagram show the result when two expressions are multiplied by each other. Use the diagram to find these two expressions.

x^2	$3x$
$2x$	6

If $x = 4$, find (i) the area (ii) the perimeter of the rectangle.

- (c) ✎ Write $\left(\frac{x+3}{5} - \frac{2x+3}{4}\right) \div \frac{4}{3}$ in its simplest form.