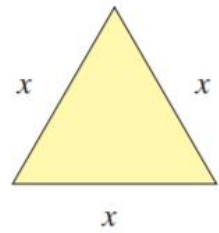


### Exercise 4M

- 1 The perimeter  $p$  of this triangle is given by the formula  $p = 3x$   
Find  $p$  when  $x = 6$ .



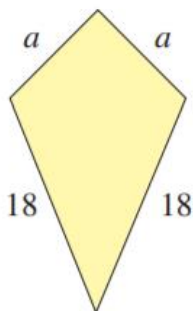
- 2 The perimeter  $p$  of a four-sided shape (quadrilateral) is given by the formula  $p = 4w + 17$ .  
Find  $p$  when  $w = 5$ .
- 3 The cost in pounds,  $C$ , for hiring a car is given by the formula  $C = 2n + 25$  where  $n$  is the number of miles travelled.  
Find  $C$  when  $n = 150$ .

- 4 The cost in pounds,  $C$ , for hiring a video camera is given by the formula  $C = 4d + 15$  where  $d$  is the number of days of hire. Find  $C$  when  $d = 8$ .
- 5 The perimeter  $p$  of a rectangle with sides  $x$  and  $y$  is given by the formula  $p = 2(x + y)$ .  
Find  $p$  when  $x = 8$  and  $y = 6$ .



- 6 The area  $A$  of a shape is given by the formula  $A = bh + 16$ . Find  $A$  when  $b = 7$  and  $h = 6$ .

- 7 A formula for the perimeter  $p$  of this kite is given by the formula  
$$p = 2a + 36$$
  
Find  $p$  when (a)  $a = 7$  (b)  $a = 43$  (c)  $a = 3.5$



- 8 A formula to work out the speed  $v$  of an object is  $v = u + at$ .  
Find  $v$  when  $u = 5$ ,  $a = 10$  and  $t = 7$ .

### Exercise 4E

A formula is given in each question. Find the value of the letter required in each case.

1  $a = 3b + 5$

Find  $a$ , when  $b = 4$

3  $h = 18 - 2g$

Find  $h$ , when  $g = 6$

5  $p = 7(q - 4)$

Find  $p$ , when  $q = 8$

7  $a = \frac{b}{3} + 16$

Find  $a$ , when  $b = 21$

9  $y = ab - 8$

Find  $y$ , when  $a = 8$ ,  $b = 3$

11  $f = gh + h$

Find  $f$ , when  $g = 5$ ,  $h = 9$

13  $c = 3fg$

Find  $c$ , when  $f = 2$ ,  $g = 9$

15  $h = 3w + yw$

Find  $h$ , when  $w = 4$ ,  $y = 6$

17  $n = \frac{x}{y} + x$

Find  $n$ , when  $x = 12$ ,  $y = 4$

19  $w = \frac{x^2 - x}{2}$

Find  $w$ , when  $x = 5$

2  $p = 4n - 9$

Find  $p$ , when  $n = 6$

4  $w = 4(p + 5)$

Find  $w$ , when  $p = 3$

6  $y = \frac{m}{4}$

Find  $y$ , when  $m = 36$

8  $c = \frac{d}{8} + 7$

Find  $c$ , when  $d = 56$

10  $x = m(9 - n)$

Find  $x$ , when  $m = 10$ ,  $n = 4$

12  $k = a(a + b)$

Find  $k$ , when  $a = 8$ ,  $b = 2$

14  $y = a^2 - b^2$

Find  $y$ , when  $a = 8$ ,  $b = 3$

16  $a = \frac{3b + 2}{4}$

Find  $a$ , when  $b = 6$

18  $r = \frac{5s}{t}$

Find  $r$ , when  $s = 8$ ,  $t = 10$

20  $y = mn + m^2$

Find  $y$ , when  $m = 9$ ,  $n = 3$

**ANSWERS**

*Page 118 Exercise 4M*

- |                  |              |                |               |              |              |
|------------------|--------------|----------------|---------------|--------------|--------------|
| <b>1.</b> 18     | <b>2.</b> 37 | <b>3.</b> £325 | <b>4.</b> £47 | <b>5.</b> 28 | <b>6.</b> 58 |
| <b>7.</b> (a) 50 | (b) 122      | (c) 43         | <b>8.</b> 75  |              |              |

*Page 118 Exercise 4E*

- |               |                |               |               |               |               |
|---------------|----------------|---------------|---------------|---------------|---------------|
| <b>1.</b> 17  | <b>2.</b> 15   | <b>3.</b> 6   | <b>4.</b> 32  | <b>5.</b> 28  | <b>6.</b> 9   |
| <b>7.</b> 23  | <b>8.</b> 14   | <b>9.</b> 16  | <b>10.</b> 50 | <b>11.</b> 54 | <b>12.</b> 80 |
| <b>13.</b> 54 | <b>14.</b> 55  | <b>15.</b> 36 | <b>16.</b> 5  | <b>17.</b> 15 | <b>18.</b> 4  |
| <b>19.</b> 10 | <b>20.</b> 108 |               |               |               |               |