

## Revision 3

1 Write each ratio in its simplest form.

(a)  $3 : 18 = 1 : 6$

(b)  $15 : 5 = 3 : 1$

(c)  $48 : 60 = 4 : 5$

(d)  $75 : 100 = 3 : 4$

(e)  $243 : 90 = 27 : 10$

(f)  $43 : 43 = 1 : 1$

2 Evaluate the given expression for different values of  $n$ .

| $n$ | $100 - 6n$ |
|-----|------------|
| 1   | 94         |
| 2   | 88         |
| 3   | 82         |
| 5   | 70         |
| 11  | 34         |

3 Write an algebraic expression for  $T$  in terms of  $k$  to describe a rule for this sequence.

|                  |   |   |    |    |
|------------------|---|---|----|----|
| Term number, $k$ | 1 | 2 | 3  | 4  |
| Term, $T$        | 4 | 9 | 14 | 19 |

$$T = 5k - 1$$

4 Find the value of  $x$  in each of the following equations.

(a)  $9 + x = 14$

5

(b)  $16 - x = 4$

12

(c)  $x - 16 = 35$

51

(d)  $3x = 21$

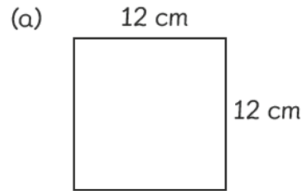
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(e)  $\frac{80}{x} = 16$

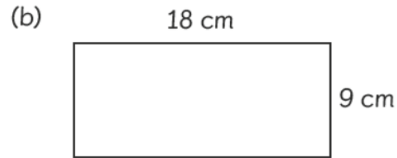
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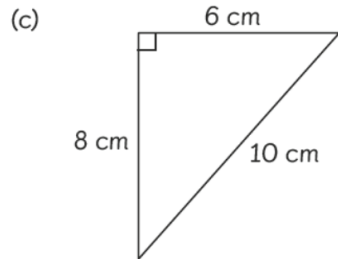
8 Find the area and the perimeter of each figure.



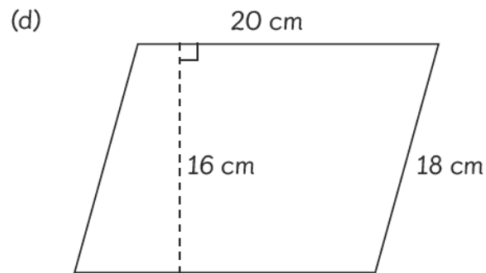
area =  $144 \text{ cm}^2$   
perimeter =  $48 \text{ cm}$



area =  $162 \text{ cm}^2$   
perimeter =  $54 \text{ cm}$

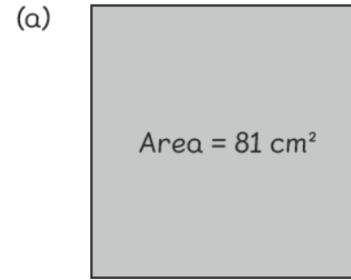


area =  $24 \text{ cm}^2$   
perimeter =  $24 \text{ cm}$

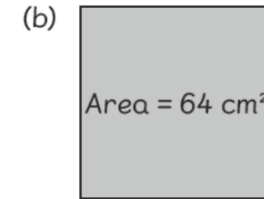


area =  $320 \text{ cm}^2$   
perimeter =  $76 \text{ cm}$

9 Find the side length and the perimeter of each square.



side length =  $9$   
perimeter =  $36$



side length =  $8$   
perimeter =  $32$

10 A rectangle has a perimeter of 68 cm. Its shorter side is 12 cm shorter than its longer side.

(a) Find the length of its longer side and the length of its shorter side.

$68 \div 2 = 34$   
 $34 - 12 = 22$   
 $22 \div 2 = 11 \text{ cm (short side)}$   
 $11 + 12 = 23 \text{ cm (long side)}$

(b) Calculate its area.

$23 \times 11 = 253 \text{ cm}^2$