1.   Evaluate, without a calculator:

    (a) $1\dfrac{1}{3}+1\dfrac{1}{4}$ (b) $2\dfrac{1}{5}-1\dfrac{1}{2}$ (c) $\dfrac{3}{5}+2\dfrac{1}{4}$
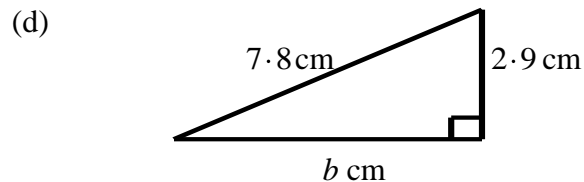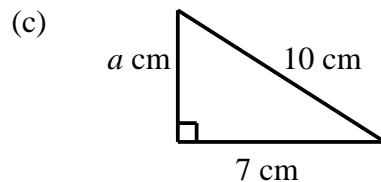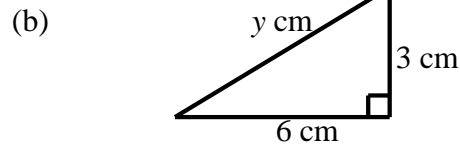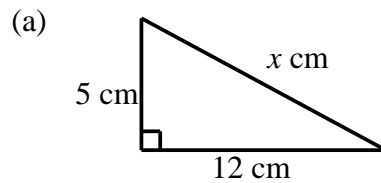
2.   Evaluate, without a calculator:

    (a) $1\cdot25\times400$ (b) $16\cdot2\div200$ (c) $16000\div320$

3.   Find the length of the unknown side in each of the following triangles:

    (a)

        x cm

    5 cm

        12 cm

    (b) y cm   3 cm   6 cm

    (c) a cm   10 cm   7 cm

    (d) $7\cdot8$ cm $2\cdot9$ cm b cm

4.   A rectangle has length 8 cm and breadth 5 cm. Calculate the length of a diagonal, to one decimal place.

5.   An equilateral triangle has sides of 12 cm.

    (a)   Calculate the length of its altitude.
    (b)   Hence calculate its area.

6.   Evaluate:
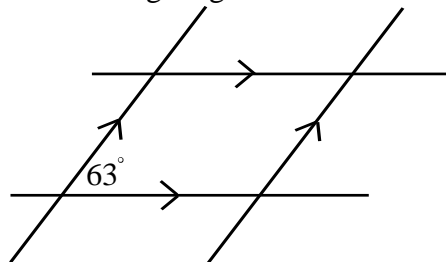
    (a) -7×-5 (b) $-18\div-9$ (c) -9^{2}

    (d) -9^{2} (e) -2^{3} (f) -1^{100}

7.   7.   Copy the following diagram and fill in the size of all remaining angles:
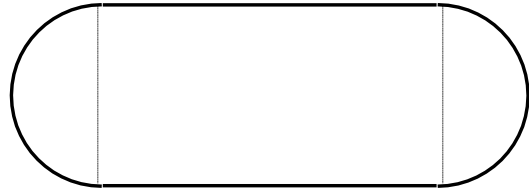
    $63°$

8.   A car travels at an average speed of 48 km/hr for 3 hours 15 minutes. How far does it travel?

9.   £1400 is divided in the ratio $3:4$. Calculate the larger share.

10.   The diagram below shows a shape consisting of a rectangle and two half-circles.
       The rectangle has length 80 cm and breadth 40 cm.

       (a)   Calculate the area of the shape.
       (b)   Calculate the perimeter of the shape.

11.   A cuboid has length 10 cm, breadth 6cm and height 4 cm. Calculate:

       (a)   Its volume   (b)   Its total surface area.

12.   Write each of these numbers in standard form:

       (a)   107 000 000   (b)   0·000 042   (c) $17 \times 0 \cdot 0003$

13.   Write each of these numbers in the normal way:

       (a) $4 \cdot 18 \times 10^{4}$ (b) 3×10^{-5} (c) $5 \cdot 03 \times 10^{-1}$