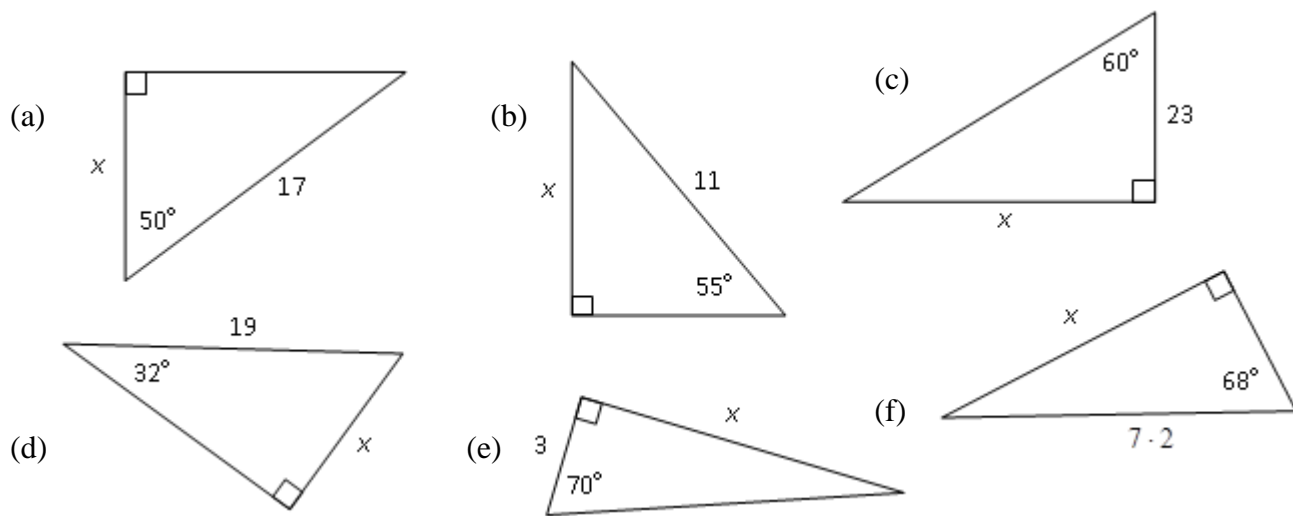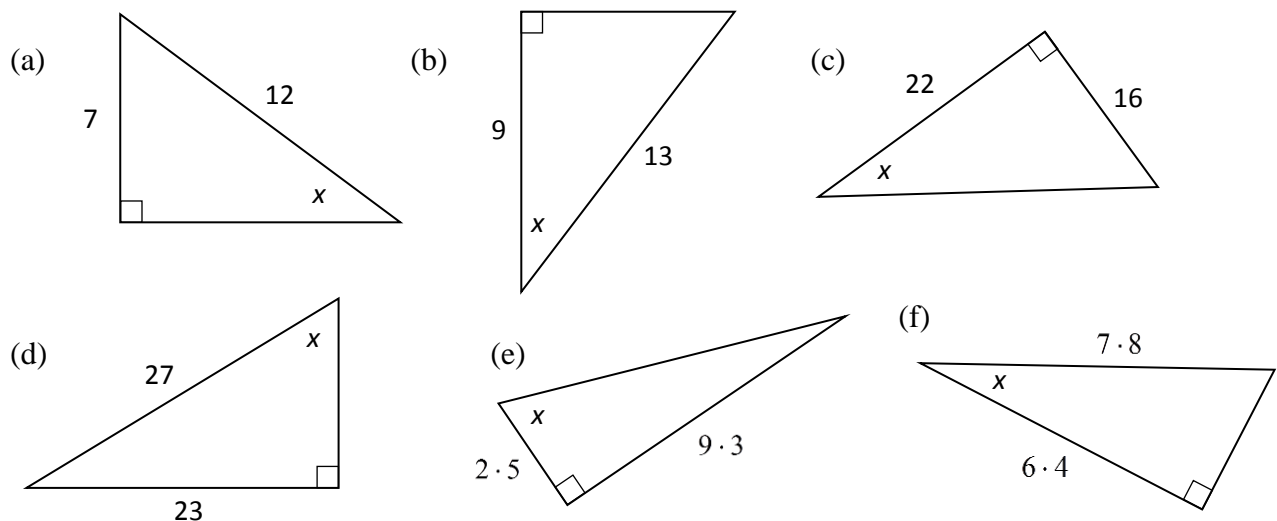# National 4 Mathematics: Homework 11

§ 1 Trigonometry

1   Calculate the length of the side marked x in each triangle below.

(a)

(b)

(c) 60° 23

x 50° 17

x 11 55°

x

(d) 19 32° x

(e) 3 70° x

(f) x 68° 7·2

2   Find the size of angle x in each diagram.

(a) 7 12 x

(b) 9 13 x

(c) 22 16 x

(d) 27 x 23

(e) 2·5 x 9·3

(f) 7·8 x 6·4

National 4 Mathematics: Homework 11

§ 2 Change the Subject of the Formula
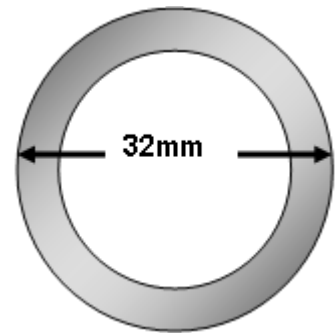
1 Change the subject of the formula to k.

$$T = kx - s$$

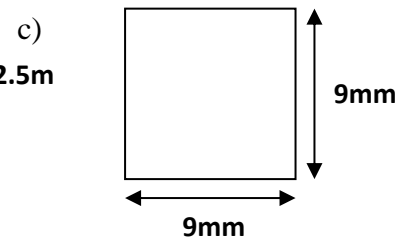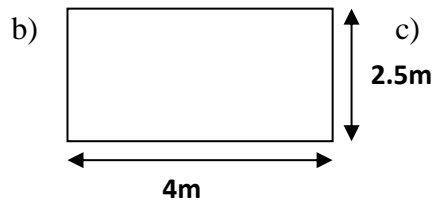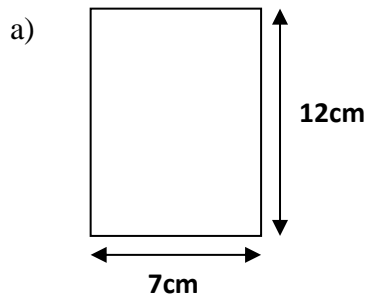**2** Change the subject of the formula to h.

$$S = \frac{rh}{m}$$

§ 3 Mixed

1 A two pound coin is made up of a silver coin of diameter 22mm surrounded by a gold coloured ring. The diameter of the whole coin is 32mm.
Calculate (a) the circumference of the whole coin
(b) the area of the whole coin
(c) the area of the silver part of the coin
(d) the area of the gold part of the coin.

2 Calculate the perimeter and area of the following shapes.

a)

12cm

7cm

b)

2.5m

4m

c)

9mm

9mm

3 Solve the following equations

(a) $7x - 8 = 6$

(b) $9w - 4 = 4w + 11$

(c) $8b + 4 = 5b + 37$

(d) $9(x - 3) = 18$