Year 9 Mathematics
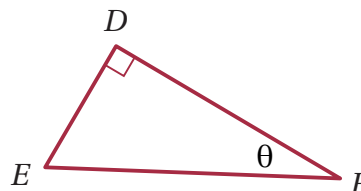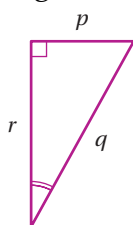# Trigonometry Practice Test 2

1   For triangle DEF name

   a)   the hypotenuse

   b)   the side opposite angle

   c)   the side adjacent to angle

   d)   the side opposite angle E

   e)   the side adjacent to angle E
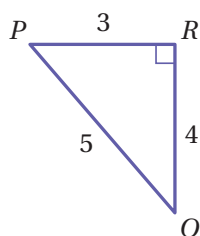
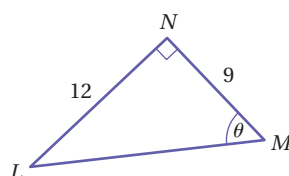2 Name the sides in this right triangle referring to the marked angle

3 For the right angled triangle PQR find the value of

   a) sin P

   b) sin Q
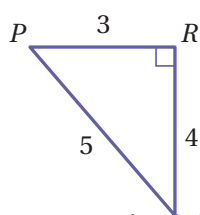
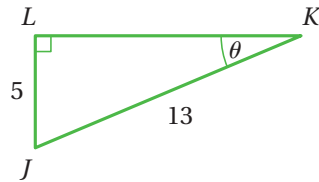4 Use Pythagoras' Theorem to find the value of the unknown side in △LMN and then find the value of sin

5 For the right angled triangle PQR find the value of

   a) cos P

   b) cos Q

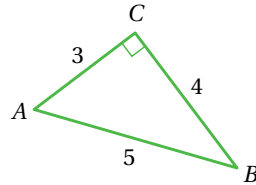6 Use Pythagoras' Theorem to find the value of the unknown side in △JKL and then

find the value of cos
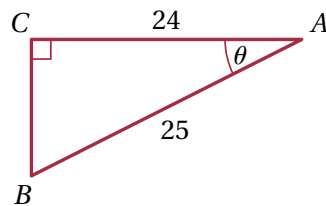

7 For the right angled triangle ABC find the value of

a) tan A

b) tan B

8 Use Pythagoras' Theorem to find the value of the unknown side in △JKL and then find the value of tan

9 Find

a) sin 59° b) cos 23° c) tan 60°

10 Find

a) 8 sin 30° b) 2.5 cos 39° c) 6.83 tan 37°

11 Find

a) $\dfrac{11}{\sin 54°}$ b) $\dfrac{2.36}{\cos 31°}$ c) $\dfrac{12.67}{\tan 32°}$

12 Given that sin   = 0.5 find

13 If cos   = $\dfrac{3}{4}$ what is the value of   to the nearest degree?

14 Given that tan   = $\dfrac{5}{9}$ find   to the nearest degree

15 If sin   = $\dfrac{7}{13}$ what is the value of   to the nearest degree
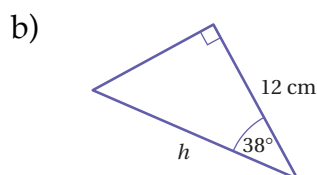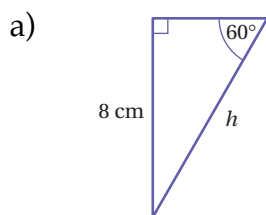
16 Find the value of x to one decimal place
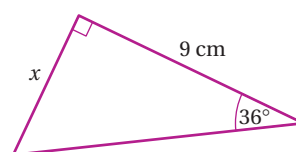
17 In triangle ABC ∠C = 90° ∠B = 34.5 and AB = 5.6 cm. Find BC correct to two decimal places

18 A ladder 8.4 m long leans against a wall. How far is its foot from the wall, if it makes an angle of 53° with the horizontal ground? Answer in metres to 2 decimal places.
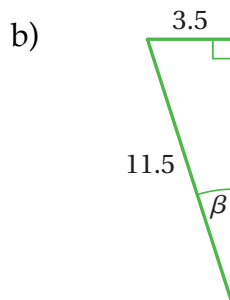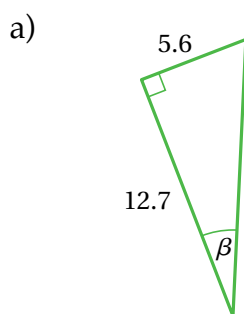
8.4 m

53°

$\leftarrow$ x $\rightarrow$
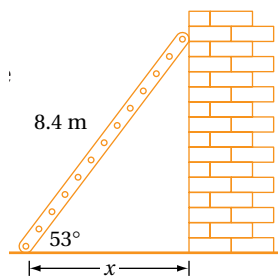
19 Find the value of h correct to 1 decimal place

a)

60°

8 cm

h

b)

12 cm

h   38°

20 Find the length of the diagonal of a rectangle, *D* given that the length of the rectangle is 10.7 cm and the diagonal makes an angle of 39° with the longer side. Answer correct to 1 decimal place.

21 Find the value of   correct to the nearest degree

a)

5.6

12.7

β

b)

3.5

11.5

β

22 A 15 m ladder standing on level ground reaches 11 m up a vertical wall. Find the angle that the ladder makes with the ground. (Give your answer to the nearest degree.)

23 *ABCD* is a rectangle with *AC* = 25 cm and *AD* = 14 cm. Find ∠*DAC* correct to the nearest degree.

24 The angle of elevation of the top of a tower *AB* is 58° from a point *C* on the ground 200 metres from the middle of the base of the tower. Calculate the height of the tower to the nearest metre.

25 From the top of a building 90 m tall, the angle of depression to a car parked on the ground is 48°. Find the distance of the car from the base of the building. Write your answer correct to 2 decimal places.