Pythagoras – mixed questions
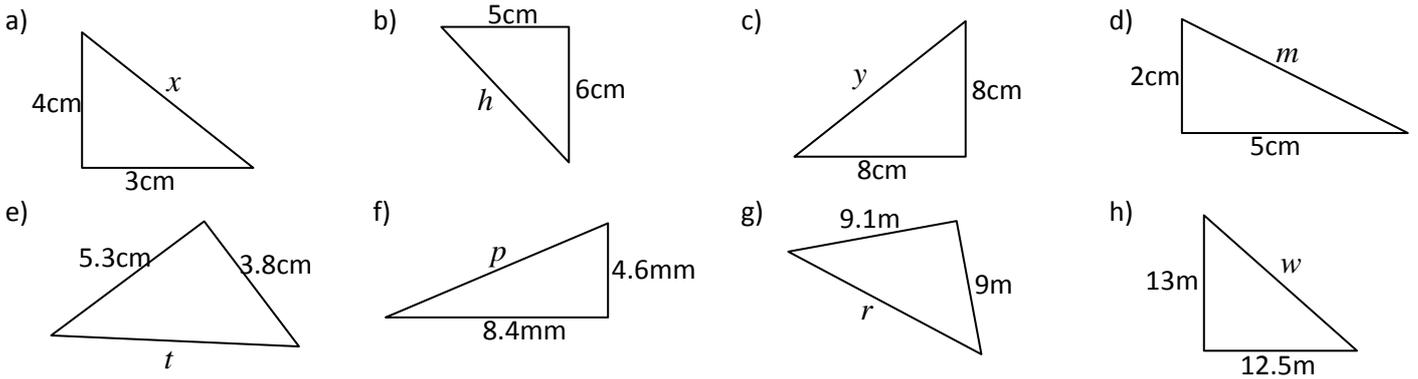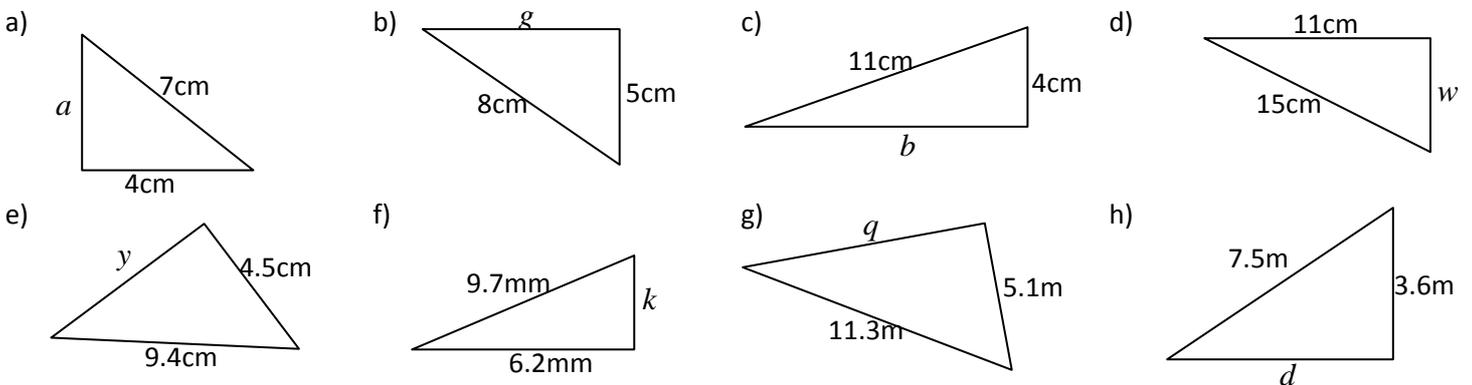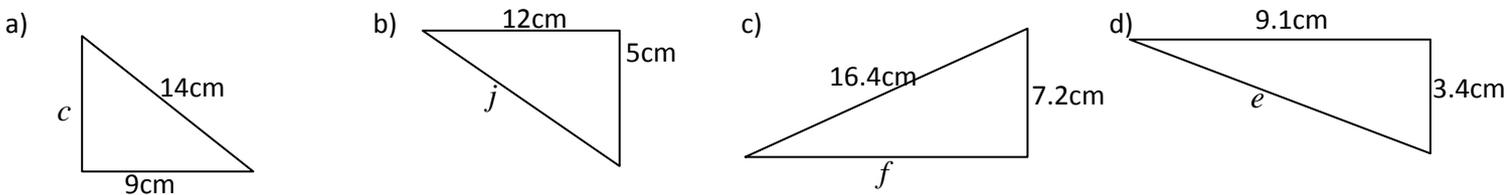
1. In each of these right angled triangles find the missing longer side. Where necessary, round answers to 1dp.

a)

4cm x 3cm

b)

5cm h 6cm

c)

y 8cm 8cm

d)

2cm m 5cm

e)

5.3cm 3.8cm t

f)

p 4.6mm 8.4mm

g)

9.1m 9m r

h)

13m w 12.5m

2. In each of these right angled triangles find the missing shorter side. Where necessary, round answers to 1dp.

a)

a 7cm 4cm

b)

g 8cm 5cm

c)

11cm 4cm b

d)

11cm 15cm w

e)

y 4.5cm 9.4cm

f)

9.7mm k 6.2mm

g)

q 5.1m 11.3m

h)

7.5m 3.6m d

3. These are a mixture of longer and shorter side problems, find the missing side choosing the method carefully. Where necessary, round answers to 1dp.

a)

c 14cm 9cm

b)

12cm 5cm j

c)

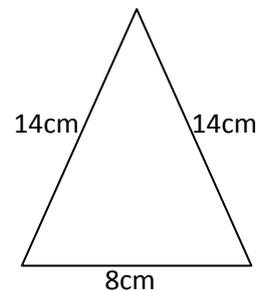16.4cm 7.2cm f

d)

9.1cm 3.4cm e

4. A man walks 8km north then 10 km east. How far is he from his starting position (Draw a diagram to help you).

5. A rectangular door measures 2.5m by 1m. How long is the diagonal of the door?

6. To the right is an isosceles triangle. Use Pythagoras to find the height of the triangle.

14cm 14cm

8cm

Hint – you will need to cut the triangle in half to get a right angled triangle first.

EXTENSION

Estimate the width and length of the floor of your classroom. Use Pythagoras to work out the distance from one corner to the opposite corner.

What other distances can you work out using estimate and Pythagoras in your classroom