

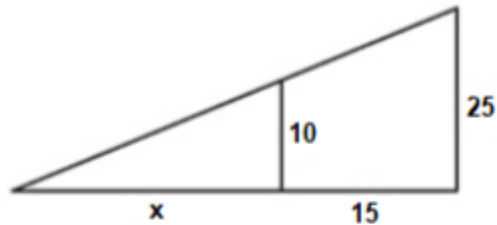
## GEOMETRY TEST – 2° ESO

**Exercise 1: (1.5 pts)** Find the sides of a right-angled triangle knowing that they measure  $x-2$ ,  $x+5$  and  $x+6$  cm

The sides measure 13 cm, 12 cm and 5 cm

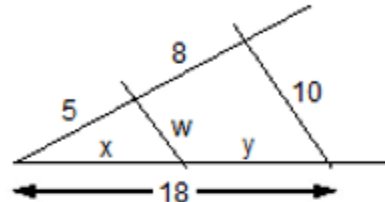
**Exercise 2: (2 pts)** Find the value of the unknowns:

a)



$$x = 10$$

b)



$$x = 6.92$$

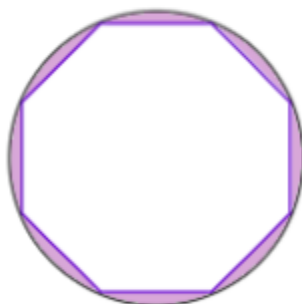
$$y = 11.08$$

$$w = 3.84$$

**Exercise 3: (0.75 pts)** Find the height of the Space Needle, in Seattle, if I am standing 50 m away from it and knowing that at a certain moment of the day our shadows coincide. You also have to know that I am 1.55 m high and my shadow measures 42 cm  $h = 186.07$  m

**Exercise 4: (1 pt)** Find the area of a right-angled trapezium if the bases measure 15 cm and 25 cm and the slanted side has a length of 17 cm  $A = 274.99$  cm<sup>2</sup>

**Exercise 5: (1.25 pts)** Find the area of the region between a circle and regular octagon with sides of length 5 cm and radius of length 8 cm inscribed within

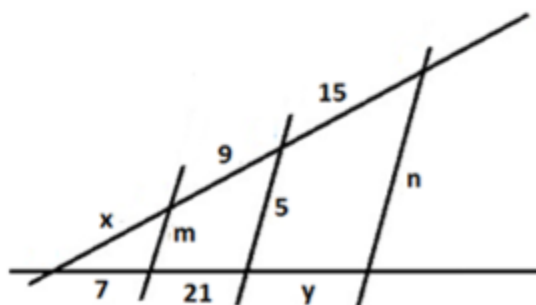


$$A_{OCT} = 151.99 \text{ cm}^2$$

$$A_{CIR} = 201.06 \text{ cm}^2$$

$$A_{TOT} = 49.07 \text{ cm}^2$$

**Exercise 6: (1.5 pts)** Find the values of the unknowns:



$$x = 3$$

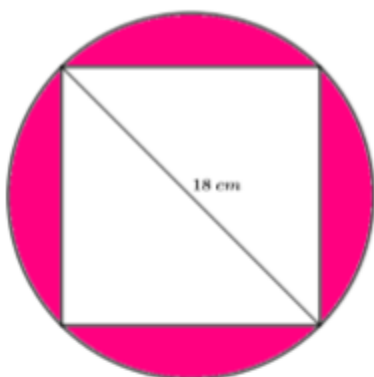
$$y = 35$$

$$m = 1.25$$

$$n = 11.25$$



**Exercise 7: (1.25 pts)** Find the area of the shadowed region between the circle and the square if its diagonal measures 18 cm



$$A_{SQ} = 162 \text{ cm}^2$$

$$A_{CR} = 254.47 \text{ cm}^2$$

$$A_{TOT} = 92.47 \text{ cm}^2$$

**Exercise 8: (0.75 pts)** Enunciate Pythagoras' theorem

In any right-angled triangle the square of the hypotenuse equals the sum of the squares of the other two sides

