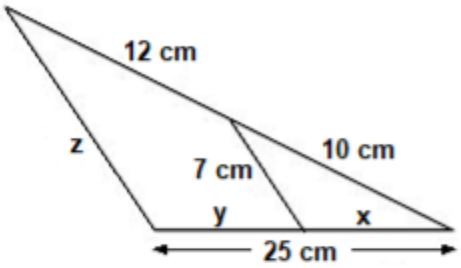
GEOMETRY TEST - 3º ESO

Exercise 1: (0.5 points) Enunciate Pythagoras' theorem In any right-angled triangle the square of the hypotenuse equals the sum of the squares of the other two sides

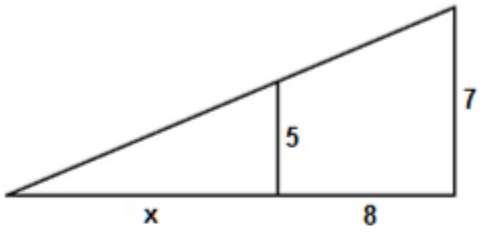
Exercise 2: (2 ptos) Work out the values of the indeterminates in the following figures:

a)



$x = 11.36$ $y = 13.63$ $z = 15.4$

b)

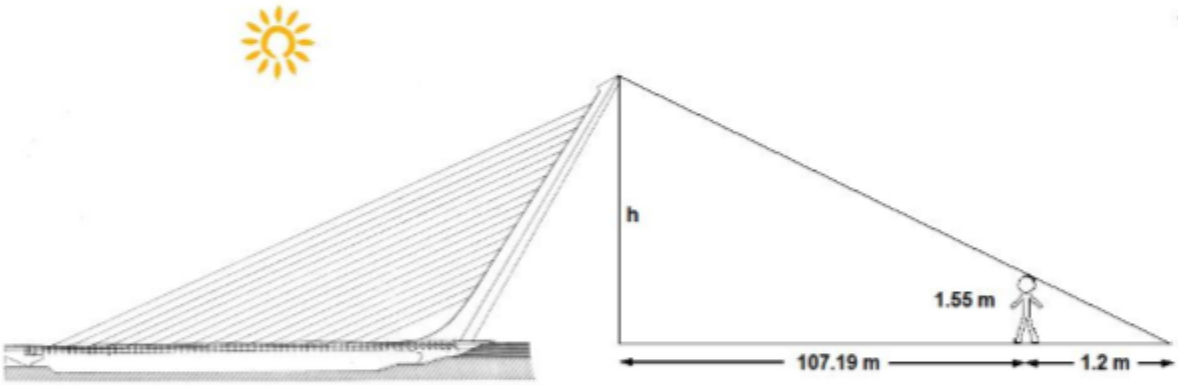


$x = 20$

Exercise 3: (1 point) Find the axial diagonal of a cuboid with sides of length 15 cm, 17 cm and 20 cm

$D = 30.23$ cm

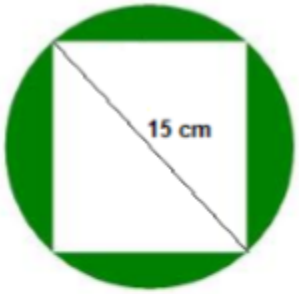
Exercise 4: (1 point) Find the height of the Alamillo Bridge in Seville: $h = 140$ m



Exercise 5: (1.25 points) Work out the value of the sides of a right-angled triangle if they measure $x-1$, $x+2$, and $x+5$ meters The sides have lengths of 15 cm, 12 cm and 9 cm

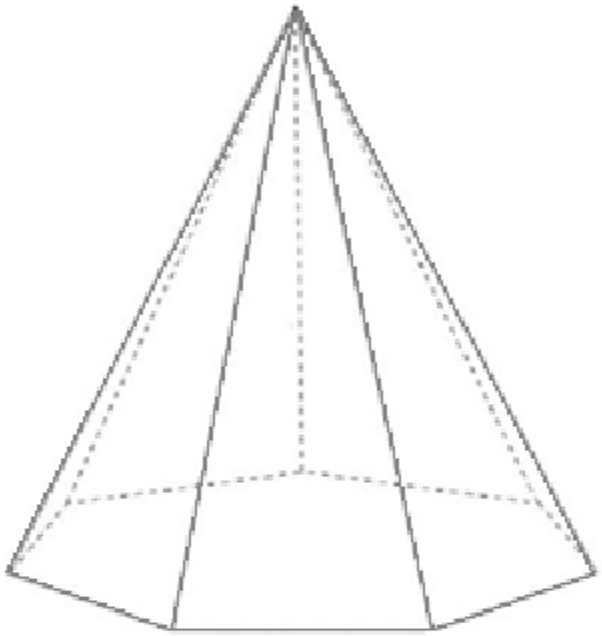
Exercise 6: (1.25 points) Find the area of an isosceles trapezium if the bases measure 43 cm and 57 cm and the slanted side has a length of 30 cm $A_T = 1458.51$ cm^2

Exercise 7: (1.25 points) Work out the value of the shadowed area between the circle and the square:



$$A_T = 64.21 \text{ cm}^2$$

Exercise 8: (1.75 points) Work out the value of the area of a heptagonal pyramid with altitude 12 cm if the length of the side of the base is 25 cm and the edge of the faces measures 20 cm.



$$A_{LAT} = 1366.09 \text{ cm}^2$$

$$A_{BASE} = 873.56 \text{ cm}^2$$

$$A_{PYR} = 2239.65 \text{ cm}^2$$