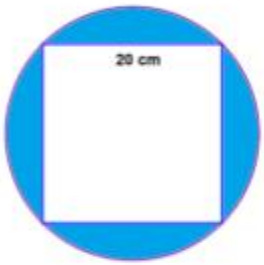
GEOMETRY TEST

2° ESO

Exercise 1: **(0.75 ptos)** 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: **(1.25 ptos)** Find the area of the shadowed region between the circle and the square if its side measures 20 cm



$A = 228.32 \text{ cm}^2$

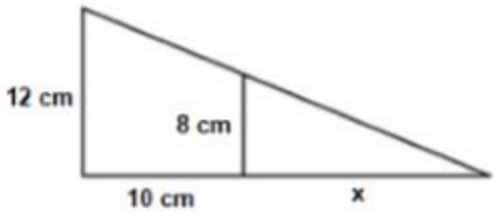
Exercise 3: **(1 pto)** Find the area of a right-angled trapezium if the bases measure 15 cm and 23 cm and the slanted side has a length of 12 cm $A = 169.88 \text{ cm}^2$

Exercise 4: **(1.25 ptos)** Find the area of the region between a circle and regular octagon with sides of length 13 cm and radius of length 17 cm inscribed within

$A = 91.09 \text{ cm}^2$

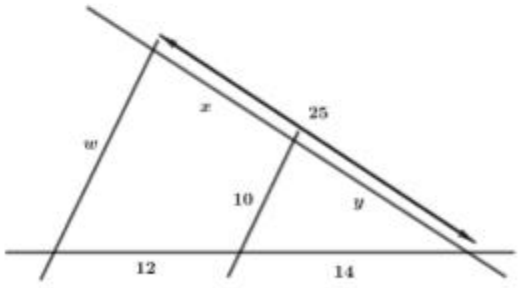
Exercise 5: **(2 ptos)** Find the value of the unknowns:

a)



$x = 20 \text{ cm}$

b)

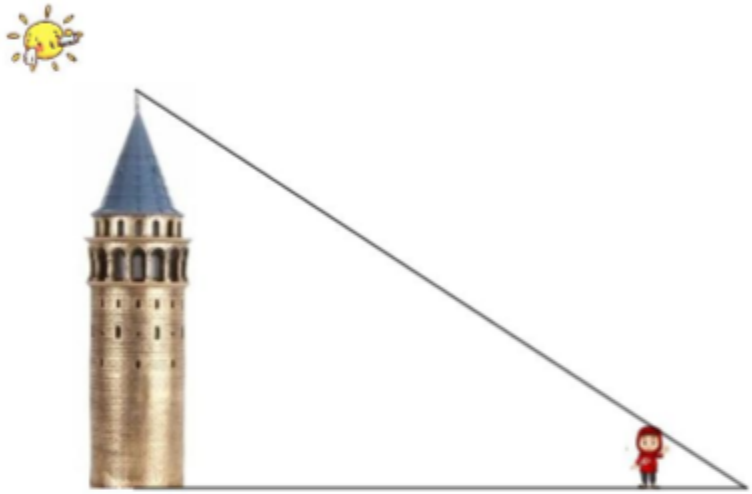


$x = 11.54 \quad y = 13.46 \quad w = 18.57$

Exercise 6: (1.5 ptos) Find the sides of a right-angled triangle knowing that they measure x, $x+1$ and $x-7$ cm

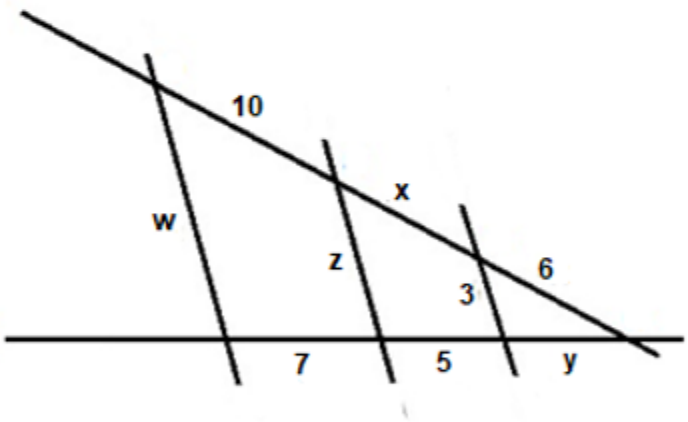
The sides measure 13 cm, 12 cm and 5 cm

Exercise 7: (0.75 ptos) Find the height of the Galata Kulesi in İstanbul, knowing that my height is 1.53 m and at a certain moment of a very sunny day my shadow measures 75 cm and the shadow of the tower measures 30.88 m



63 m

Exercise 8: (1.5 ptos) Find the values of the unknowns x, y, z and w:



$x=7.14$ $y=4.2$ $w=11.57$ $z=6.57$