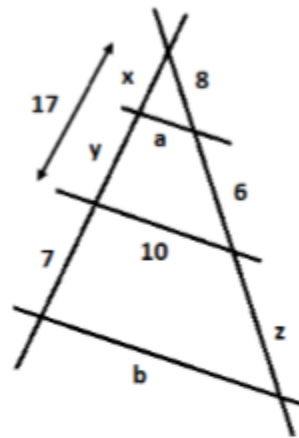
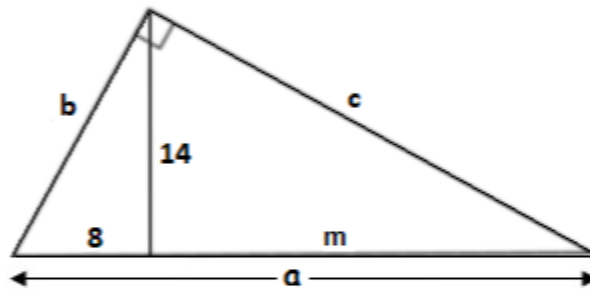


GEOMETRY TEST - 4º ESO

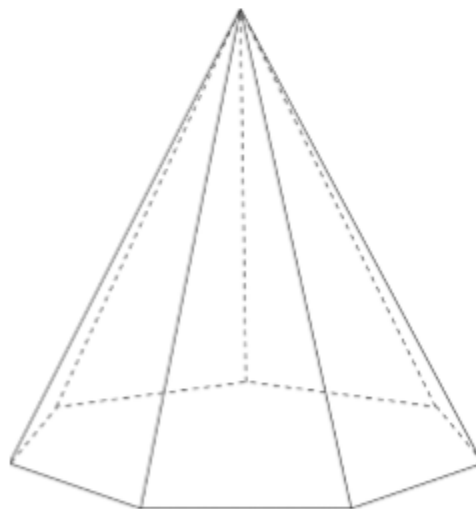
Exercise 1: (1.25 points) Find the value of the unknowns:



Exercise 2: (1 point) Find the values of the indeterminates in the following figure without using Pythagoras' theorem



Exercise 3: (1.25 points) Find the area of a heptagonal pyramid with altitude of length 12 cm if the side of the base measures 14 cm and the edge has a length of 16 cm



Exercise 4: (1 point)

- Turn into radians 105° and 300°
- Turn into degrees $\frac{2\pi}{3}$ and $\frac{5\pi}{4}$

Exercise 5: (1 point) Given the vectors $\vec{u} = (-3, 7)$, $\vec{v} = (2, -1)$ and $\vec{w} = (-21, 38)$

- Find the length of the vector \vec{u}
- Express \vec{w} as a linear combination of \vec{u} and \vec{v}
- Are \vec{u} and \vec{v} perpendicular vectors?

Exercise 6: (1 point)

- If $\vec{u} = (2, -3)$ and $\vec{v} = (4, 1)$ find a third vector \vec{w} so that $\vec{w} \cdot \vec{v} = 2$ and $\vec{w} \perp \vec{u}$
- Indicate a direction vector and a point of the straight line $7x + 2y - 9 = 0$

Exercise 7: (1 point) Given the straight line $r \equiv \frac{x-2}{3} = \frac{y+7}{2}$

- Find the general equation of a parallel line r' that goes through the point $P(1, -4)$
- Find the general equation a perpendicular line r'' that goes through the point $Q(5, -2)$

Exercise 8: (1.25 points)

- Work out the coordinates of the symmetric point of $A(-3, 7)$ with respect to $Q(-1, -2)$
- Find the parametric and continuous equations of the straight line $2x - 5y + 10 = 0$

Exercise 9: (1.25 points) Find the value of k so that the triangle $A(k+2, 5)$, $B(6, 4)$ and $C(2k+1, 6)$ is isosceles