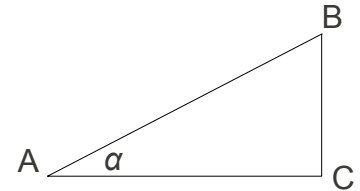


TOTAL	SUM	MARKS
10		

NAME	GROUP
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1. The measurement of the projected shadow of a tree equals  $20\text{ m}$  at the same time as your own shadow length equals  $2\text{ m}$ . Find out the height of the tree.  
*Note: Use your own real height.*

2. Solve the triangle beside, where  $\sin \alpha = 0,6$  and  $\overline{AC} = 8$ .



3. i. Explain briefly what a radian is. Sketch a graph with your explanation.  
ii. Evaluate the equivalence in radians for the angle of  $195^\circ$ .  
iii. Evaluate the equivalence in degrees for the angle of  $3\text{ rad}$ .

4. i. What's the meaning of 'reducing angles to the first quadrant'? Give some examples.  
ii. Find out which angles belonging to the first quadrant can the following angles be reduced to:  $120^\circ$ ,  $255^\circ$  e  $315^\circ$ .

iii. Evaluate the trigonometric ratios (sine, cosine and tangent) of the angles of  $200^\circ$  and  $290^\circ$ , as we know that  $\cos 70^\circ = 0,34$ .

5. Solve the trigonometric equation  $\sin^2 x - \cos^2 x = -\frac{1}{2}$ .

6. i. What's the difference between an equation and an identity? Give an example in trigonometric terms.

ii. Proof the following trigonometric identity:  $\frac{1 + \sin \alpha}{\cos \alpha} = \frac{\cos \alpha}{1 - \sin \alpha}$ .

7. As we go walking along the seaside we can see the Porto do Son with an angle of  $40^\circ$  to the left handside from the direction ahead. When we walk  $500\text{ m}$  in the same direction, the angle changes to  $55^\circ$ . Find out the distance from the coast line to Porto do Son.  
*Note: The coast must be thought to be a long and straight line.*

Mínimos 4<sup>o</sup> ESO

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|--|-------|---|-------|---|-------|
| <input type="checkbox"/> Área e perímetro de cuadrados, rectángulos e triángulos | FICHA | <input type="checkbox"/> Uso de parénteses  | FICHA | <input type="checkbox"/> Raíces; extracción de factores | FICHA |
| <input type="checkbox"/> Operacións con fraccións e decimais                     | FICHA | <input type="checkbox"/> Suma, resta, multiplicación e división de números naturais | FICHA | <input type="checkbox"/> Igualdades notáveis            | FICHA |
| <input type="checkbox"/> Regra dos signos  | FICHA | <input type="checkbox"/> Potências de exponente natural e propiedades               | FICHA | <input type="checkbox"/> Álgebra de polinómios          | FICHA |
| <input type="checkbox"/> Operacións con números inteiros                         | FICHA | <input type="checkbox"/> Área e perímetro do círculo                                | FICHA |   |       |
| <input type="checkbox"/> Cálculo do MCD e mcm                                    | FICHA | <input type="checkbox"/> Potências de exponente inteiro                             | FICHA |   |       |

DESCONTA

RECUPERA