Name:
Group 1
Result:

1. *(1 point)*
Convert from radians to degrees or from degrees to radians. Express angle in radians in terms of π.

a) $120° =$ b) $450° =$ c) $\frac{3\pi}{4} =$

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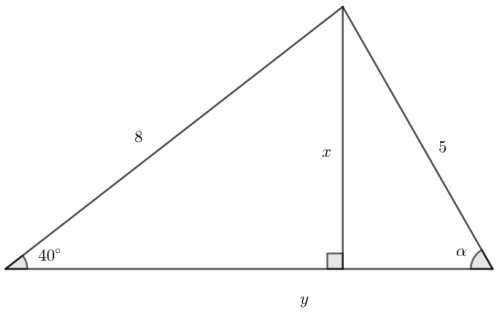
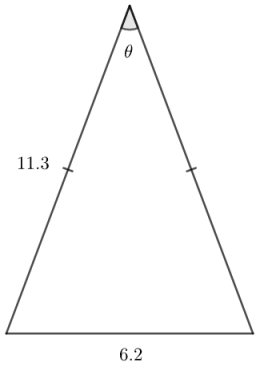
2. *(3 points)*
Consider the following triangle:



Find x, y and α.

3. *(2 points)*

Consider the following isosceles triangle:



Find the measure of the angle θ.

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4. *(3 points)*

Two building are 54 metres apart. From the top of the smaller building the angle of elevation to the top of the other building is 19° and the angle of depression to the bottom of the other building is 42°. Calculate the height of the taller building.

5. *(3 points)*

A ship sails towards a 15-metre high cliff. The angle of elevation from the ship to the top of the cliff is 4°. Calculate how many metres does the ship need to sail in order for the angle of elevation to increase to 12°.

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6. *(4 points)*

Observation points A and B are South and East of a tower respectively. The angles of elevation from A and B to the top of the tower are 12° and 25° respectively. Calculate the height of the tower of the distance between A and B is 200 metres.