



# 3D Trigonometry (A)

## ANSWERS



**NOT TO  
SCALE**

Calculate the following using trigonometry and Pythagoras.  
Give answers to 2 decimal places.

T is vertically above A  
ABCD is a rectangular car park  
M is the midpoint of CD

Calculate:	
The length of the line AD	<b>73.78 m</b>
The size of angle ADT	<b>13.71°</b>
The angle between AM and AC	<b>37.78°</b>
The length of the line AM	<b>50.61 m</b>
The length of the line TM	<b>53.72 m</b>

PQRSTUWV is a cube  
PQ = 5 cm

Calculate:	
The size of angle RQS	<b>45°</b>
The length of the line PR	<b>7.07 cm</b>
The size of angle PRU	<b>35.27°</b>
The length of the line US	<b>7.07 cm</b>
The angle between PS and the base UWST	<b>35.27°</b>

LMNOPQ is a wedge  
The base PQNO and the face LMPQ are rectangles

Calculate:	
The size of angle LNM	<b>38.66°</b>
The length of the line LN	<b>12.81 cm</b>
The length of the line PO	<b>8.48 cm</b>
The angle between LN and the base PQNO	<b>24.48°</b>
The angle between XN and the base PQNO	<b>16.31°</b>

ABCDE is a square-based pyramid  
E is directly above the centre of the base  
EQ is the perpendicular height, 12 cm  
P is the midpoint of DC

Calculate:	
The size of angle DQP	<b>45°</b>
The length of EP	<b>12.5 cm</b>
The size of angle EPQ	<b>73.74°</b>
The angle between EB and the base ABCD	<b>67.58°</b>
The surface area of the pyramid	<b>224 cm<sup>2</sup></b>