

3D Trigonometry and Pythagoras (A)

ANSWERS



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

NOT TO SCALE

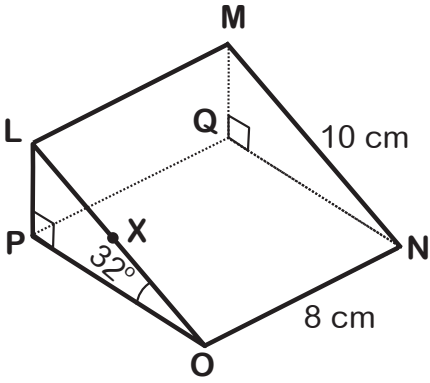
<p>T is vertically above A ABCD is a rectangular car park M is the midpoint of CD</p>	Calculate:	
	The length of the line AD	73.78 m
	The size of angle ADT	13.71°
	The angle between AM and AC	37.78°
	The length of the line AM	50.61 m
	The length of the line TM	53.72 m

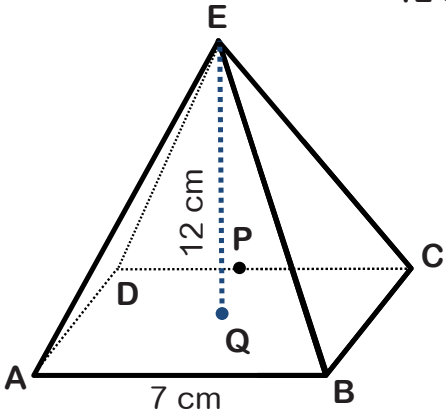
<p>PQRSTUWV is a cube PQ = 5 cm</p>	Calculate:	
	The size of angle RQS	45°
	The length of the line PR	7.07 cm
	The size of angle PRU	35.27°
	The length of the line US	7.07 cm
	The angle between PS and the base UWST	35.27°

3D Trigonometry and Pythagoras (A)

ANSWERS



<p>LMNOPQ is a wedge</p> <p>The base PQNO and the face LMPQ are rectangles</p>  <p>X is the midpoint of LO</p>	<p>Calculate:</p> <table border="1"> <tr> <td>The size of angle LNM</td> <td>38.66°</td> </tr> <tr> <td>The length of the line LN</td> <td>12.81 cm</td> </tr> <tr> <td>The length of the line PO</td> <td>8.48 cm</td> </tr> <tr> <td>The angle between LN and the base PQNO</td> <td>24.48°</td> </tr> <tr> <td>The angle between XN and the base PQNO</td> <td>16.31°</td> </tr> </table>	The size of angle LNM	38.66°	The length of the line LN	12.81 cm	The length of the line PO	8.48 cm	The angle between LN and the base PQNO	24.48°	The angle between XN and the base PQNO	16.31°
The size of angle LNM	38.66°										
The length of the line LN	12.81 cm										
The length of the line PO	8.48 cm										
The angle between LN and the base PQNO	24.48°										
The angle between XN and the base PQNO	16.31°										

<p>ABCDE is a square-based pyramid</p> <p>E is directly above the centre of the base</p> <p>EQ is the perpendicular height, 12 cm</p>  <p>P is the midpoint of DC</p>	<p>Calculate:</p> <table border="1"> <tr> <td>The size of angle DQP</td> <td>45°</td> </tr> <tr> <td>The length of EP</td> <td>12.5 cm</td> </tr> <tr> <td>The size of angle EPQ</td> <td>73.74°</td> </tr> <tr> <td>The angle between EB and the base ABCD</td> <td>67.58°</td> </tr> <tr> <td>The surface area of the pyramid</td> <td>224 cm²</td> </tr> </table>	The size of angle DQP	45°	The length of EP	12.5 cm	The size of angle EPQ	73.74°	The angle between EB and the base ABCD	67.58°	The surface area of the pyramid	224 cm²
The size of angle DQP	45°										
The length of EP	12.5 cm										
The size of angle EPQ	73.74°										
The angle between EB and the base ABCD	67.58°										
The surface area of the pyramid	224 cm²										