

Using Exact Trig Values



Section A Use the triangle diagrams to help complete the table for the exact trig values.

30°
60°
1, $\sqrt{3}$, 2

45°
45°
1, 1, $\sqrt{2}$

	0°	30°	45°	60°	90°
sin	0				1
cos	1				0
tan	0				

Section B Give the exact values.

1) $\sin 30 + \cos 60$	2) $\tan 45 + \cos 60$	3) $4 \sin 30 + \cos 0$
4) $2 \sin 60$	5) $8 \cos 45$	6) $(\sin 45)^2 + 3 \cos 60$
7) $(3 \tan 30)^2 + (\tan 60)^2$	8) $5 \sin 60 - 3 \cos 30$	9) $9 \sin 30 - 3 \sin 90 + 4 (\cos 45)^2$

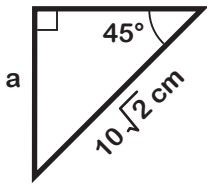
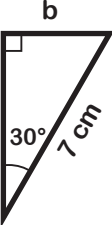
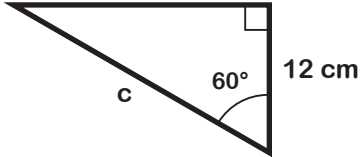
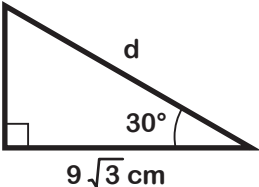
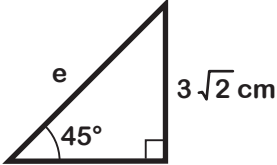
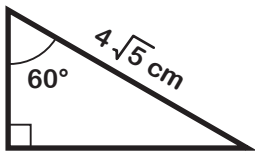
Section C Use the ratios of the given lengths to find the missing angles.

<p>1)</p> <p>$a = \underline{\hspace{2cm}}$</p>	<p>2)</p> <p>$b = \underline{\hspace{2cm}}$</p>	<p>3)</p> <p>$c = \underline{\hspace{2cm}}$</p>
<p>4)</p> <p>$d = \underline{\hspace{2cm}}$</p>	<p>5)</p> <p>$e = \underline{\hspace{2cm}}$</p>	<p>6)</p> <p>$f = \underline{\hspace{2cm}}$</p>

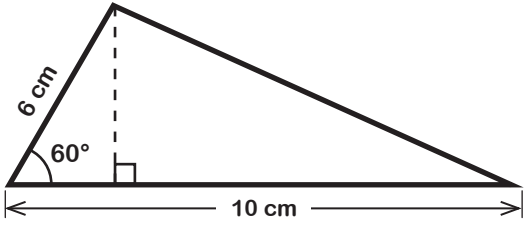
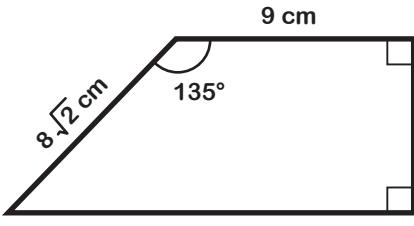
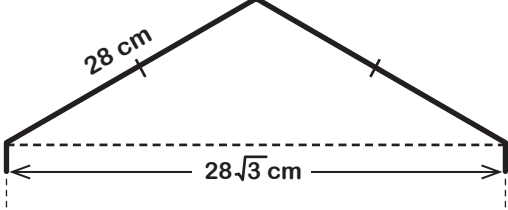
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Section D Use the exact trig values to find the missing lengths.

<p>1)</p>  <p>$a =$ _____</p>	<p>2)</p>  <p>$b =$ _____</p>	<p>3)</p>  <p>$c =$ _____</p>
<p>4)</p>  <p>$d =$ _____</p>	<p>5)</p>  <p>$e =$ _____</p>	<p>6)</p>  <p>$f =$ _____</p>

Section E Use the exact trig values to solve the problems.

<p>1) Find the area of the triangle:</p>  <p>Area = _____</p>	<p>2) Find the area of the trapezium:</p>  <p>Area = _____</p>
<p>3) Shown are two sides of a regular polygon forming an isosceles triangle with one of its diagonals.</p>  <p>How many sides does the polygon have?</p>	<p>4) The straight line graph has a y-intercept of 1 and goes through the point P (____, 8). The line makes 30° angle with the x-axis. What is the x-coordinate of P?</p> 