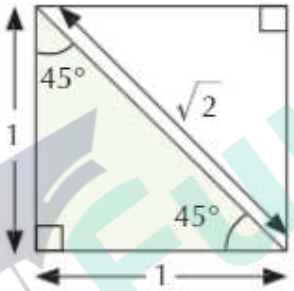
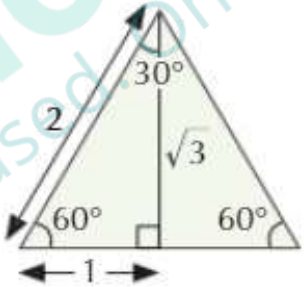


Memorize sin$x$, cos$x$, tan$x$ where x is 0°,30° ,45° ,60° or 90° (without calculator)

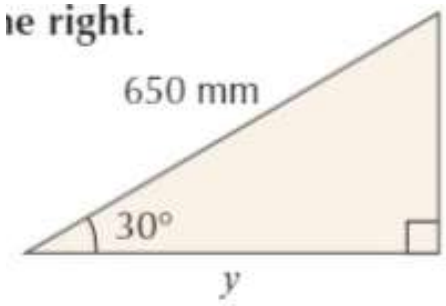
	0°	30°	45°	60°	90°
$\sin(\theta)$	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
$\cos(\theta)$	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
$\tan(\theta)$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	undefined





*** may help to memorize these triangles**

1. Without using a calculator, find the exact length of side y.

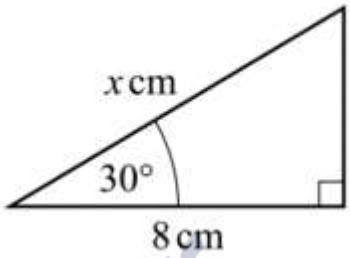


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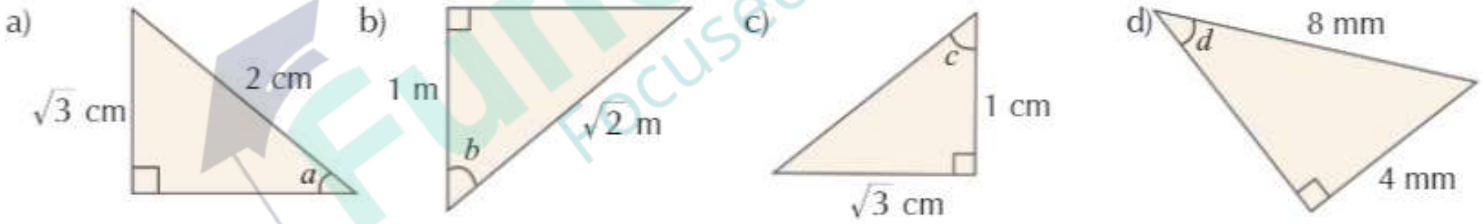


2. Find the exact value of x. [4]

0580/02/SP/25 Q22)

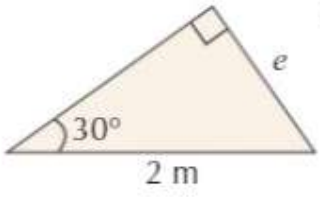


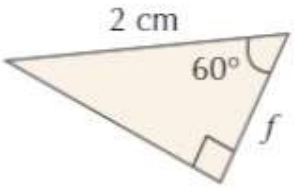
3. Find the size of the angles marked with letters.

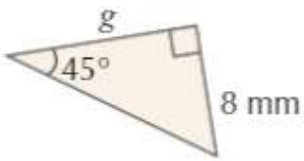


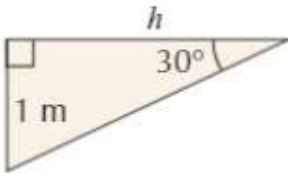
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4. Find the exact length of the sides marked with letters.

a) 

b) 

c) 

d) 

5. Show that:

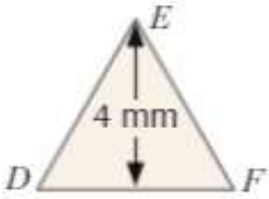
a) $\tan 45° + \sin 60° = \frac{2+\sqrt{3}}{2}$ b) $\sin 45° + \cos 45° = \sqrt{2}$ c) $\tan 30° + \tan 60° = \frac{4\sqrt{3}}{3}$

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6. Triangle ABC is isosceles. $AC = 7\sqrt{2}$ cm and angle $ABC = 90°$. What is the exact length of side AB ?

7. Triangle DEF is an equilateral triangle with a perpendicular height of 4 mm.
What is the exact side length of the triangle? Give your answer in its simplest form.

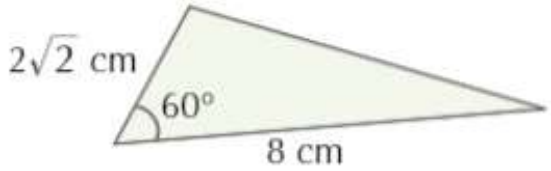


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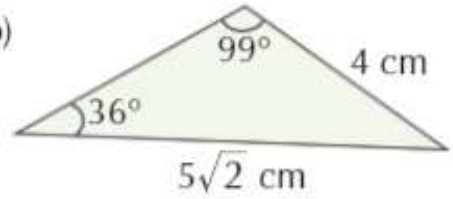


8. Find the exact area of the following triangles

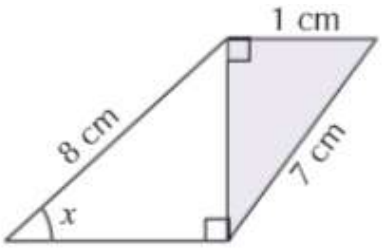
a)



b)

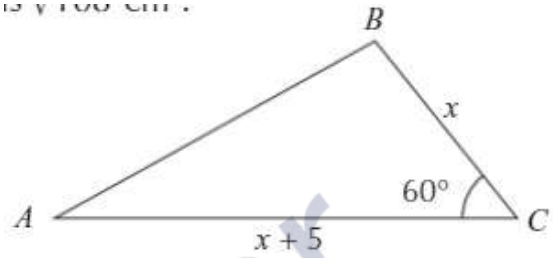


9. The shape shown below is made up of two right-angled triangles
Find the size of angle x.



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10. The diagram shows a triangle ABC where angle $ACB = 60°$, $AC = x + 5$ cm and $BC = x$ cm. The area of the triangle is $\sqrt{108}$ cm^2. Find the length of AB.



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Answers

1) $325\sqrt{3}$	7) $\frac{8\sqrt{3}}{3}$ mm
2) $\frac{16}{\sqrt{3}}$ or $\frac{16\sqrt{3}}{3}$	8) (a) $4\sqrt{6}$ cm^2 (b)10 cm^2
3) (a)60° (b)45° (c)60° (d)30°	9) 60°
4) (a)1m (b)1cm (c)8mm (d)$\sqrt{3}$m	10) 7cm
6) 7cm	

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