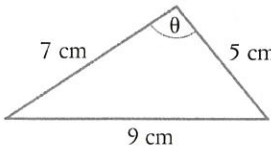


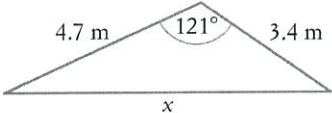


# Year 11 Methods Week 3 Quiz

16

Name: \_\_\_\_\_

1.	<p>Which statement is true?</p>  <p> <b>A</b> <math>\cos(\theta) = \frac{5^2 + 9^2 - 7^2}{2 \times 5 \times 9}</math>      <b>B</b> <math>\cos(\theta) = \frac{5^2 + 7^2 - 9^2}{5 \times 7}</math>      <b>C</b> <math>\cos(\theta) = \frac{9 + 7 - 5}{2 \times 9 \times 7}</math> </p> <p> <b>D</b> <math>\cos(\theta) = \frac{5^2 + 7^2 - 9^2}{2 \times 5 \times 7}</math>      <b>E</b> <math>\cos(\theta) = \frac{5^2 + 7^2 - 9^2}{5 \times 7}</math> </p>	1
2.	<p>Which statement is NOT true?</p> <p> <b>A</b> <math>\sin(180^\circ - x) = \sin(x)</math>      <b>B</b> <math>\sin(2\pi - x) = -\sin(x)</math>      <b>C</b> <math>\sin(2\pi + x) = \sin(x)</math> </p> <p> <b>D</b> <math>\sin(-x) = \sin(x)</math>      <b>E</b> <math>\sin(180^\circ + x) = -\sin(x)</math> </p>	1
3.	<p><math>\tan\left(\frac{4\pi}{3}\right) =</math></p> <p> <b>A</b> <math>\frac{1}{\sqrt{3}}</math>      <b>B</b> <math>-\sqrt{3}</math>      <b>C</b> <math>\sqrt{3}</math>      <b>D</b> <math>-\frac{1}{\sqrt{3}}</math>      <b>E</b> 1 </p>	1
4.	<p>Convert the following to degrees.</p> <p> <b>a</b> <math>\frac{\pi}{2} = 90^\circ</math> ✓  <b>b</b> <math>\frac{2\pi}{3} = 120^\circ</math> ✓  <b>c</b> <math>\frac{5\pi}{6} = 150^\circ</math> ✓  <b>d</b> <math>\frac{7\pi}{4} = 315^\circ</math> ✓ </p>	4

5.	<p>Evaluate <math>x</math> correct to one decimal place.</p>  $x^2 = 4.7^2 + 3.4^2 - 2 \times 4.7 \times 3.4 \times \cos(121^\circ) \checkmark$ $= 50.11 \checkmark$ $x = \sqrt{50.11}$ $\approx 7.1 \text{ m} \checkmark$	3
6.	<p>A sector is cut off by an angle of <math>\frac{3\pi}{7}</math> subtended at the centre of a circle with radius 8.6 cm.</p> <p>a Find the length of the arc cut off by this angle.</p> $L = 8.6 \times \frac{3\pi}{7} \checkmark$ $= 11.6 \text{ cm} \checkmark$ <p>b Find the area of the sector.</p> $A = \frac{1}{2} \times 8.6^2 \times \frac{3\pi}{7} \checkmark$ $= 49.8 \text{ cm}^2 \checkmark$	4
7.	<p>Which degree is at point <math>(-1, 0)</math> ?</p> $180^\circ \checkmark$	1
8.	<p>For which two angles is <math>\cos \theta = \frac{1}{2}</math> ?</p> $60^\circ \text{ and } 300^\circ \checkmark$	1