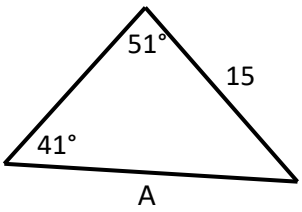
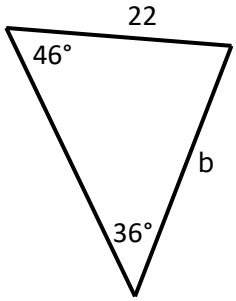
Level 2 Trigonometry Sine Rule

Calculate the unknown sides

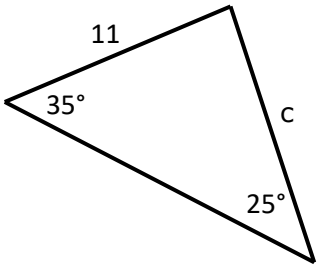
1. A =



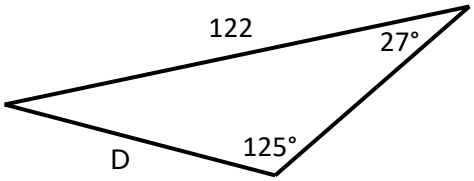
2. b =



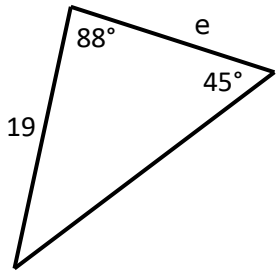
3. c =



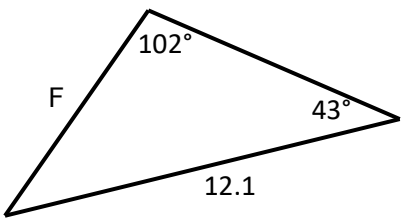
4. D =



5. e =

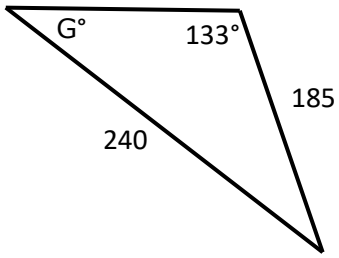


6. F =

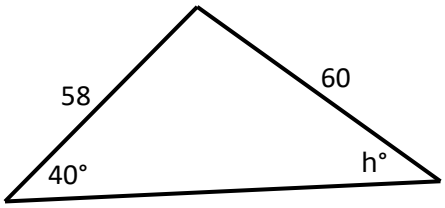


Calculate the unknown angles

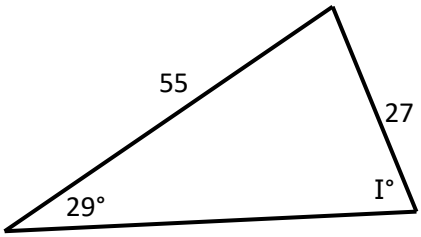
7. G° =



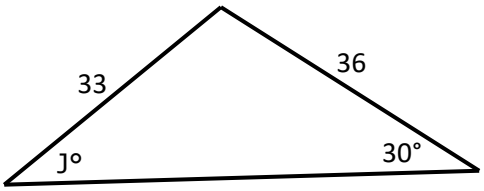
8. h° =



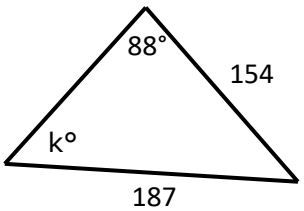
9. I° =



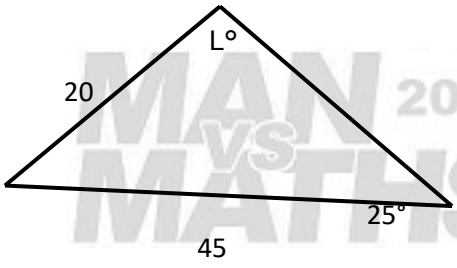
10. J° =



11. k° =



12. L° =



Answers: Level 2 Trigonometry Sine Rule

1. $A = \frac{15}{\sin 41} \times \sin 51 = 17.769$

2. $b = \frac{22}{\sin 36} \times \sin 46 = 26.924$

3. $c = \frac{11}{\sin 25} \times \sin 35 = 14.929$

4. $D = \frac{122}{\sin 125} \times \sin 27 = 67.615$

5. $e = \frac{19}{\sin 45} \times \sin 88 = 26.854$

6. $F = \frac{12.1}{\sin 102} \times \sin 43 = 8.437$

7. $\sin G = \frac{\sin 133}{240} \times 185 = 0.56375$ $G = \sin^{-1}(\text{Answer}) = 34.316°$

8. $\sin h = \frac{\sin 40}{60} \times 58 = 0.62136$ $h = \sin^{-1}(\text{Answer}) = 38.416°$

9. $\sin I = \frac{\sin 29}{27} \times 55 = 0.98758$ $I = \sin^{-1}(\text{Answer}) = 80.959°$

10. $\sin J = \frac{\sin 30}{33} \times 36 = 0.545454$ $J = \sin^{-1}(\text{Answer}) = 33.055°$

11. $\sin k = \frac{\sin 88}{187} \times 154 = 0.82303$ $k = \sin^{-1}(\text{Answer}) = 55.389°$

12. $\sin L = \frac{\sin 25}{20} \times 45 = 0.95089$ $L = \sin^{-1}(\text{Answer}) = 71.969°$

Looking at the angle L though we see it is clearly much more than 71°, since it is more than 90°.

That is because if the Sine Rule is used on an angle over 90° it gives the wrong answer. You need to take the result away from 180°.

L = 180° – 71.969° = 108.030.

You will not be expected to know that at Achieved level.