

## Worksheet

Answer the questions on this worksheet in the boxes next to the challenge questions.

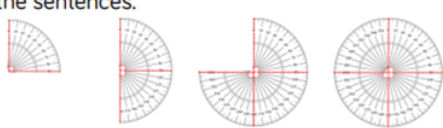
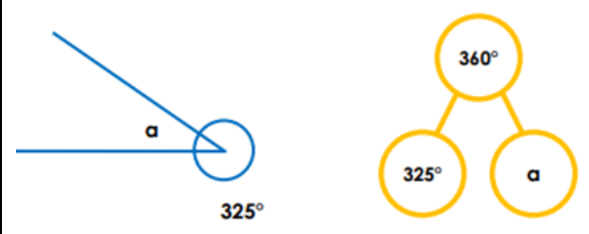
**Remember:**

The tasks are arranged in 3 challenges that get progressively more difficult.


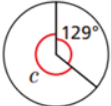
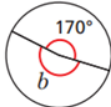
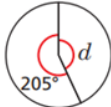
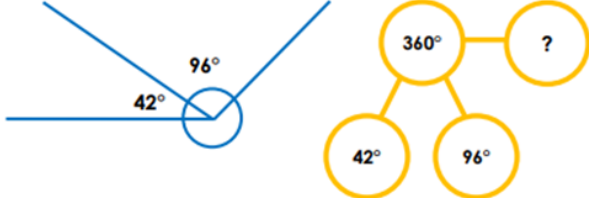

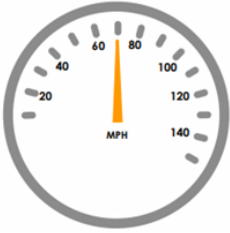
- Challenge 1 is a “mild” challenge, if you are not confident
- Challenge 2 is “spicy”, a little bit more challenging, if you are feeling confident and find the first challenge too easy.
- Challenge 3 is “hot”. The questions are designed to challenge you and can be tricky.

You can choose to do just one challenge or more than one, it is up to you. As a guide, if you are consistently getting everything correct, you should move up a challenge. If you are struggling on every question; move down a challenge.


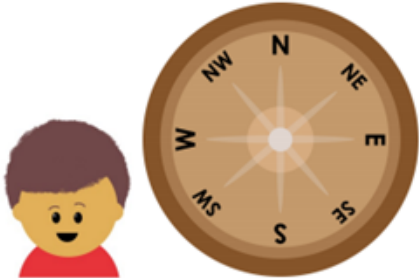
**Challenge 1:**

Question	Answer
<p>1. Complete the sentences.</p> <div style="text-align: center;">  </div> <div style="border: 1px solid green; border-radius: 15px; padding: 10px; margin: 10px auto; width: 80%; background-color: #e0f0e0;"> <p><math>\frac{1}{4}</math> of a turn = 1 right angle = <math>90^\circ</math></p> <p><math>\frac{1}{2}</math> of a turn = <u>  </u> right angles = <u>  </u>°</p> <p><math>\frac{3}{4}</math> of a turn = 3 right angles = <u>  </u>°</p> <p>A full turn = <u>  </u> right angles = <u>  </u>°</p> </div>	
<p>2.</p> <p style="text-align: center;"><b>Calculate angle a.</b></p> <div style="text-align: center;">  </div> <p>Use the part whole model to help you.</p>	

**Challenge 2:**

Question	Answer
<p><b>1</b> Work out the sizes of the unknown angles.</p> <p>a)  c) </p> <p><math>a = \square^\circ</math>      <math>c = \square^\circ</math></p> <p>b)  d) </p> <p><math>b = \square^\circ</math>      <math>d = \square^\circ</math></p>	
<p><b>2.</b></p> <p>Calculate the missing angle.</p> 	
<p><b>3.</b></p> <p>Jerry says...</p> <p>If the arrow on the speedometer makes one full turn, it will show 360mph.</p>   <p>Prove whether Jerry is right or wrong!</p>	

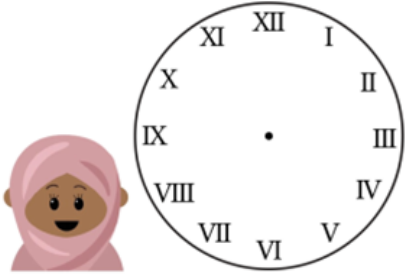
**Challenge 3:**

Question	Answer
<p>1.</p> <p>A circle is divided into ten equal sections.</p>  <p>What is the size of the angle marked <math>g</math>?</p>	
<p>2.</p> <p><b>PROBLEM SOLVING 1</b></p> <p>Use the clues to work out the direction Marlon needs to travel.</p>  <p>Start at NW and make a <math>225^\circ</math> turn clockwise.</p> <p>What direction is Marlon facing?</p> <p>How many degrees will he have to turn to be facing SW?</p>	
<p>3.</p>	

**PROBLEM SOLVING 2**

Asha's clock reads 3:30 pm.

Find the size of the two angles that the hands of the clock make at that time.



What would the angles be at 4.30?

Can you use what you know to predict what the angles would be at 5.30?