Y5-6 Maths Homework

9 / 5/ 2022
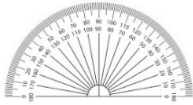
Y5

Clear Skies Academy

Helping you head into the blue

Clear Skies Flying Academy invites you to apply for their pilot training scheme. Complete the following assessment pack to show your skills and take the first step into the blue…

Please note: For this test you will need a protractor.

On the route below, the pilot thinks she is making a turn of 180 degrees clockwise to change course from a course set NW to one set SW.
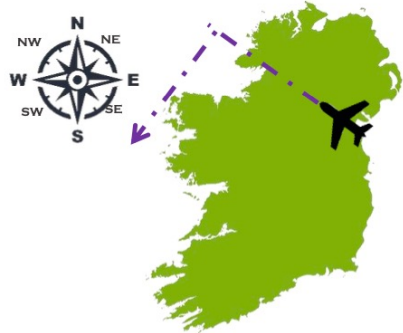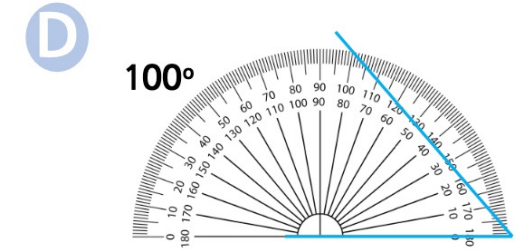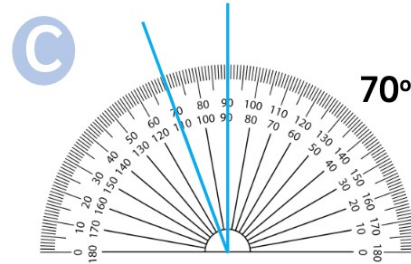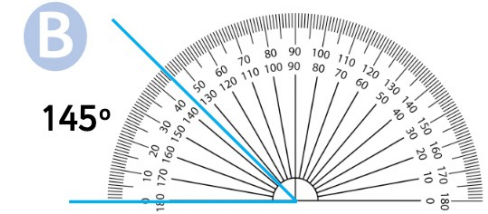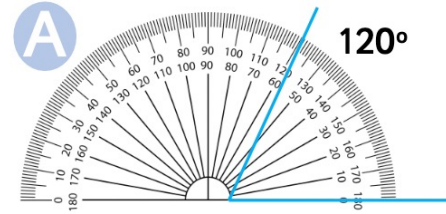
1. Is she correct? Explain your answer.

It is essential you can estimate angles from a map in case of an emergency diversion route. This skill will allow you to change course quickly, but it should always be followed up by working out the accurate angle.

2. Estimate the size of the following angles:

The pilot has measured these angles.

A 120°

B 145°

C 70°

D 100°

4. Is he correct? Prove it and explain any mistakes.

5. Use the map below to draw the following flight plan beginning at London Heathrow Airport, marked with a green dot. 1cm = 1000 miles

Travel 2,000 miles west, turn 90° anticlockwise.

Travel 3,000 miles turn 120° clockwise.

Travel 3,000 miles turn

Y6

The Year 6 class from Forest Primary School are having a day out at South Sea Sailing Club.
They are learning all about the adventures you can have whilst sailing from Steve and Ali, who own the sailing club.

The sailing boats are all moored and ready for when they will be next used.
When the wind blows, it makes the boats change the direction that they are facing.

1. Approximately, what angle has each boat been moved by the wind?
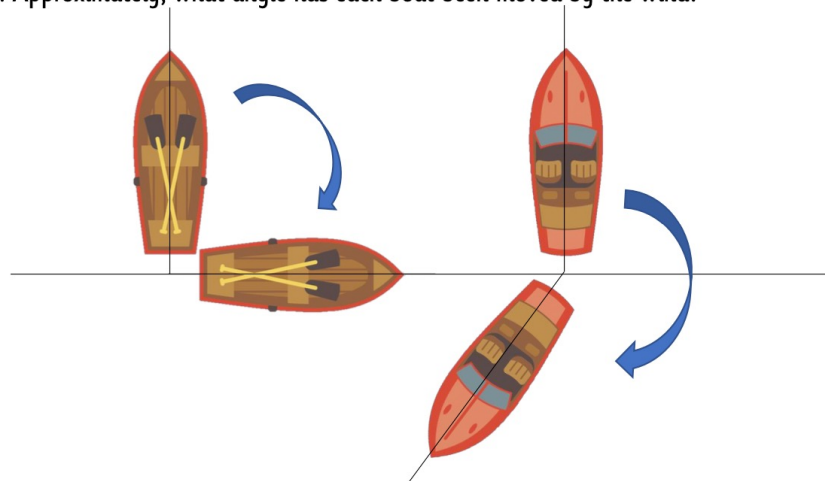
Steve is giving the children a guided tour inside the workshop. He is showing them some of the navigational instruments that they use when they take the boats out on voyages. A compass is used to navigate a vessel in the correct direction. It displays north, east, south and west.

2a. If a boat is travelling north, what angle does it turn if it wants to travel west. Is there more than one answer? Explain why.

2b. Draw an angle anywhere on the compass to represent an angle of 45°.

Ali takes the children onto the biggest ship in the workshop. It doesn't get to go out to sea anymore and the children are blown away with how spectacular it is to be standing at the back of the ship in front of the magnificent helm (a ship's wheel).
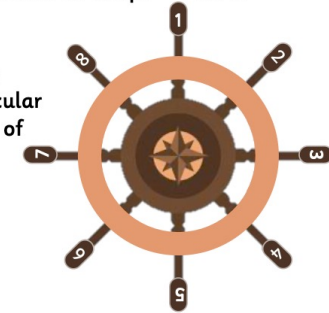
There are 8 handles used to turn the wheel, the wheel can be turned a full 360°.

3a. What angle is between each handle?

3b. Simon turns handle 1 clockwise and it finishes at position 8. How many degrees did the handle move through?

3c. If Simon turns handle one 135°. What position could it finish at?

Viktor is looking at some of the vintage pieces of sailing equipment and he sees a pair of oars that were once used to assist a sailor to sail independently across the English Channel.

4a. He knows that angle a is 47°.
Is it possible for him to calculate the other 3 angles?
Prove it.