



HMS CAROLINE BELFAST

Maths Challenge



LENGTH

HMS Caroline measures 446 feet (ft).

Q: Can you convert this into metres (m)? 1ft = 0.3m

Q: As a class, can you measure out the length of HMS Caroline in your sport hall or playing field?



INVENTION

Sir Charles Algernon Parsons was born in 1854 in Ireland and died in 1931. He invented the steam turbine in 1884 and these turbines were first used in marine vessels in 1897. Steam turbines revolutionized marine transport and naval warfare.

Q: What age was Charles Parsons when he invented his steam turbine?



WEIGHT

HMS Caroline weighs around 4,000 tons. A ship's weight is known as its displacement.

Q: If the weight of an empty double decker bus is 12 tons, how many buses would it take to weigh the same as HMS Caroline? Round your answer up to the next full number.



POWER

HMS Caroline's Parsons Turbines produce 40,000 Horse Power (HP). This means it would take 40,000 horses to pull the ship!

Q: If a Formula 1 racing car generates 600HP, how many Formula 1 racing cars would it take to generate enough power to pull HMS Caroline? Round your answer up to the next full number.

Use this space for your working out



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GUNS

When first built in 1914 HMS Caroline had:

- Two 6 inch guns (a gun shaft with a 6 inch diameter)
- Eight 4 inch guns (a gun with a 4 inch diameter)
- One 6 pounder (anti-aircraft gun)

Later HMS Caroline had:

- Four 6 inch guns
- Four 4 inch guns
- Two 3 inch anti-aircraft guns

Q: How many guns did HMS Caroline have when it was first built in 1914?

Q: How many did it have later?

Q: HMS Caroline's 6 inch guns could fire a 100 pound (lbs) shell up to 7.5 miles. Can you convert 100 lbs into kilograms? (1lb = 0.45 kilograms).

Q: Can you convert 7.5 miles into kilometres? 1 mile = 1.6 kilometres.



SPEED

HMS Caroline has a top speed of 30 knots, this is equal to 34.5mph (miles per hour). Belfast to Stranraer is 42 miles.

Q: How long would it take HMS Caroline, at top speed, to reach Stranraer from Belfast?

Remember: **speed = distance/time** therefore: **time = distance/speed**



TORPEDO

HMS Caroline had two 21 inch torpedo tubes on each side of the ship.

Q: How many torpedo tubes did it have in total?

Q: Do you know what each side of the ship is called?

Left =

Right =

Q: A Whitehead torpedo could travel 5.5 miles. Can you convert this into kilometres? 1 mile = 1.6 kilometres.



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