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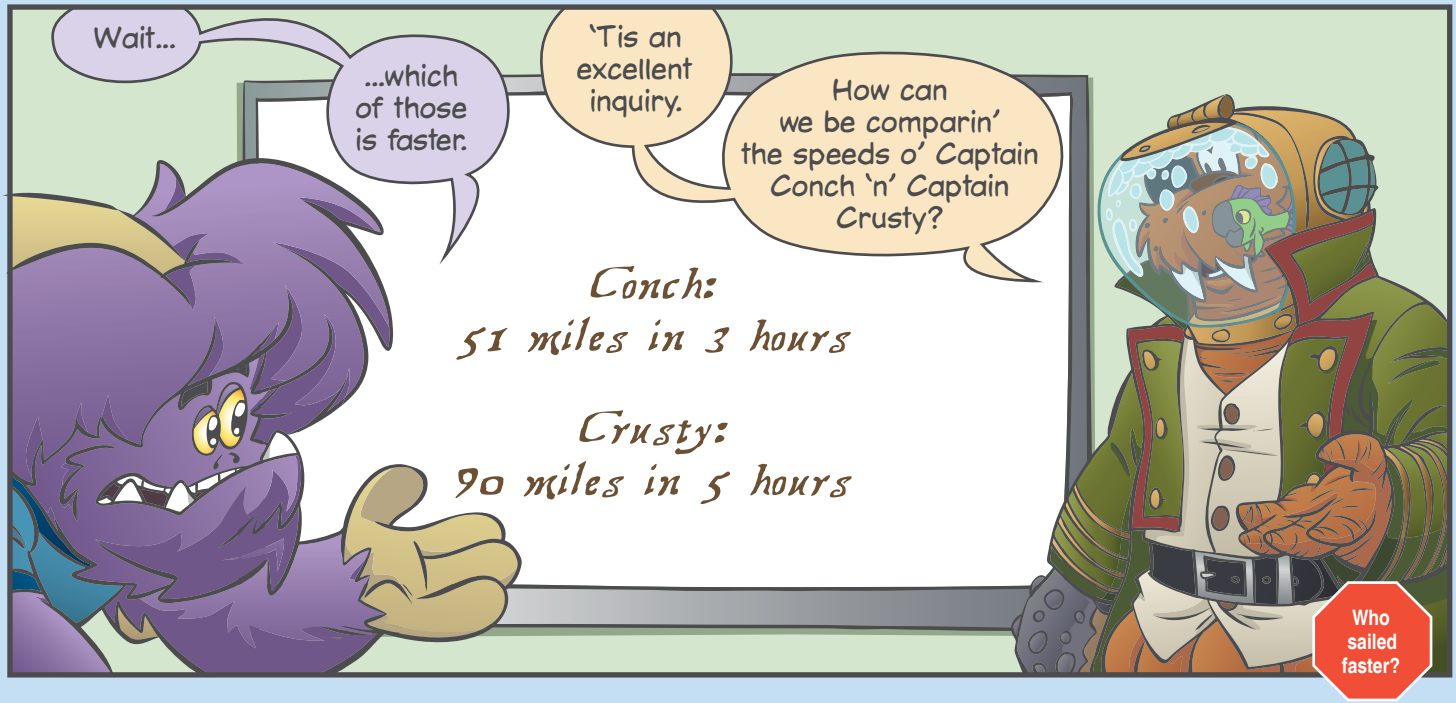

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What if the two captains sailed for the ***same*** amount of time? Since 3 and 5 are both factors of 15, we can figure out how far each captain could sail in 15 hours.

Conch:
51 miles in 3 hours
255 miles in 15 hours

Conch sailed 51 miles in 3 hours. At that speed, he could go $51 \cdot 5 = 255$ miles in $3 \cdot 5 = 15$ hours.

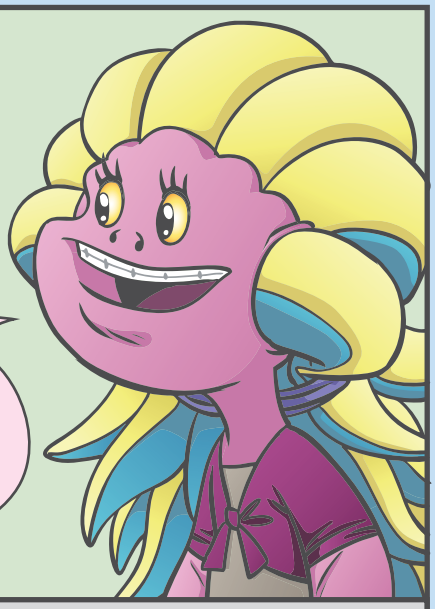
Crusty:
90 miles in 5 hours
270 miles in 15 hours

Crusty sailed 90 miles in 5 hours. At that speed, he could go $90 \cdot 3 = 270$ miles in $5 \cdot 3 = 15$ hours.

Crusty was faster.

Conch:
51 miles in 3 hours = 17 miles per hour

Crusty:
90 miles in 5 hours = 18 miles per hour



Instead of figuring out how far each Captain could sail in ***15*** hours, I figured out how far each could go in ***1*** hour.

For Conch to travel 51 miles in 3 hours, he had to travel $51 \div 3 = 17$ miles per hour.

For Crusty to travel 90 miles in 5 hours, he had to travel $90 \div 5 = 18$ miles per hour.

"PER" MEANS "FOR EACH" OR "FOR EVERY."

Excellent figurin', little monsters. ***Speed*** be the ratio of distance to time.

We often express speed as the distance traveled for one unit o' time...

...for example, as the number o' miles traveled per hour.

We can abbreviate "miles per hour" as mph.

$$\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{90 \text{ mi}}{5 \text{ hr}} = \frac{18 \text{ mi}}{1 \text{ hr}} = 18 \text{ mph}$$

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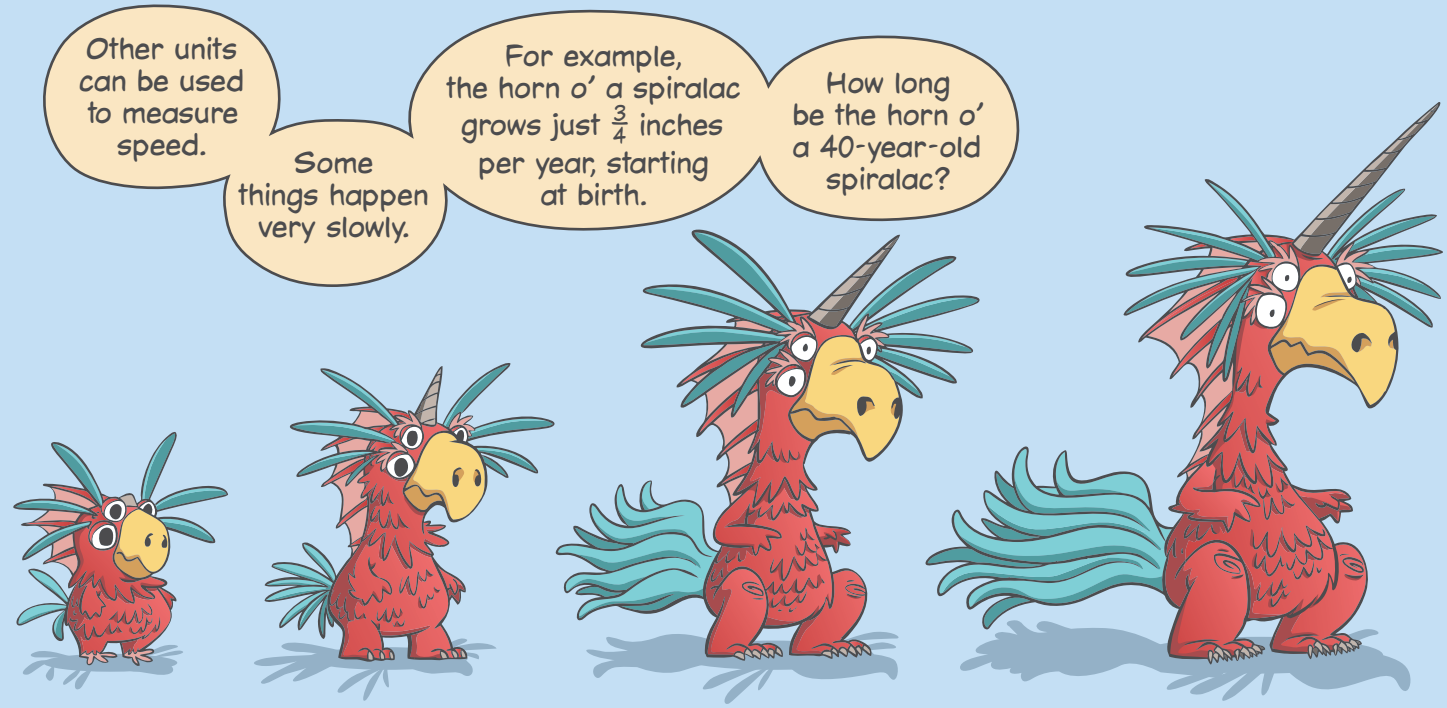

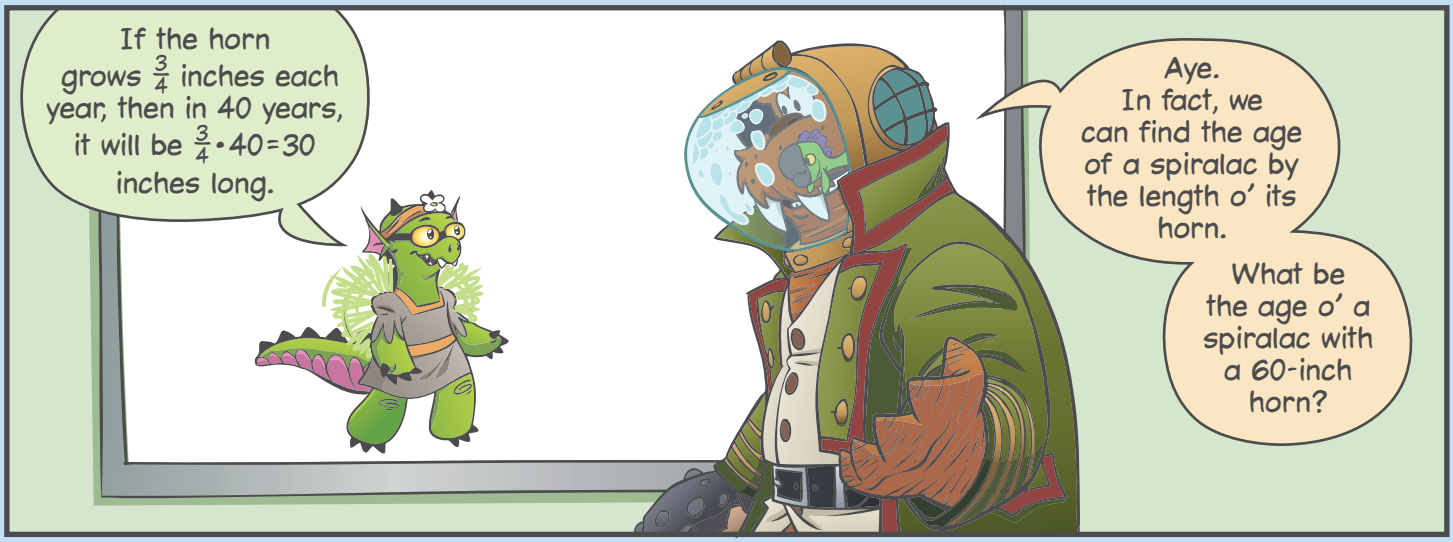

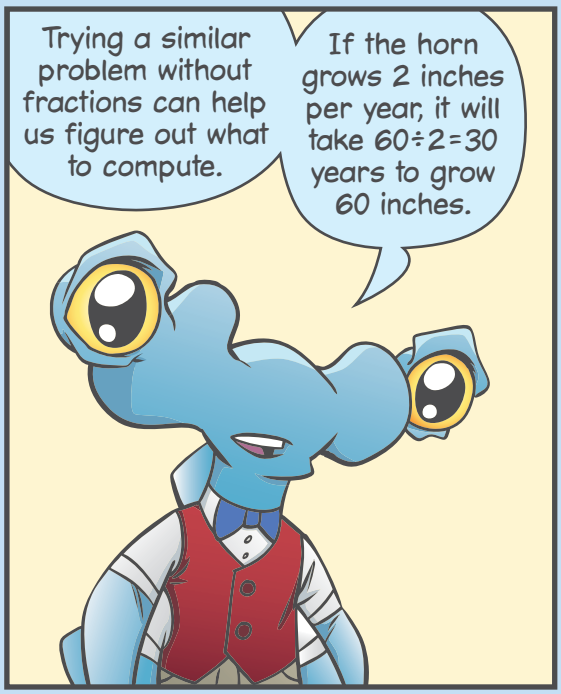

$$60 \div \frac{3}{4} = 60 \cdot \frac{4}{3} = \frac{240}{3} = 80$$

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