

1) How many ways can the 5 letters in the word "Water" be re-arranged and written if we want to use all the 5 letters just once?

2) A swimming pool can be filled with water by using potentially 2 taps.

If we use only the first tap, it takes 3 hours to entirely fill the swimming pool with water. If we use only the second tap, it takes 6 hours to entirely fill the swimming pool with water.



Via the sinker, the water needs 4 hours to be drained entirely to leave an empty swimming pool.

a) The beach opens at 8:00am. By using both taps, what time should we open both taps to entirely fill the swimming pool with water?

b) One day, the facility team started using both taps to fill the swimming pool with water, but 30 minutes later they realized that the sinker was still open. Once realized, they immediately closed the sinker to keep the water in the pool. How many hours did they need to entirely fill the swimming pool with water?

3) The sea water contains 5% salt. Soups contain 2% salt.



We want to cook fish soup by pouring sea water to the tap water.

To cook the fish soup, how many sea water do we need to add if we want to use 3 liter tap water?

4) How would the water level of the oceans be increased, if their water temperature were increased by 2 °C in average? Take an average depth of 2000 meters of the oceans and sea-water coefficient of thermal expansion of the water to be identical.

$$(\alpha_{\text{viz}} = 4,3 \cdot 10^{-5} \frac{1}{^{\circ}\text{C}}.)$$

5) How many liters of water fall in a 1 km² area when a 5 mm of rain fall?

6) The boat is currently swimming on the sea. The horn of the sea boat sounds in all directions. Who hears the sound of the boat horn at the earliest? The diver who is diving in the deep water, or the seagulls circling in the same distance but in the sky? Briefly explain your answer!



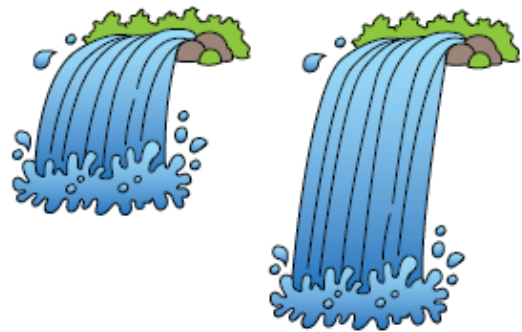
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7) True (T) or False (F)? Write the correct solution to the line before the statement.

a)The water of the right waterfall has a greater energy.

b)The stone which weighs 3 tons and is on the top of the left waterfall has the same energy as the stone which weighs 4 tons and is on the top of the right waterfall.



8) We are mixing ice with water. Is it possible that after mixing ice and water, we will only get ice?

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 How?

9) If the ice of the Arctic melted, the sea level on the Earth would

- a) increase
- b) sink
- c) be the same with no change.

What if the ice of the Antarctica melted?

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