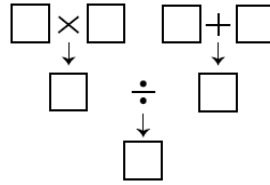


Storm Day Challenge due Friday February 9th Try all 3 questions and have your name into a draw for prizes!

Question 1

In the diagram, four different integers from 1 to 9 inclusive are placed in the four boxes in the top row. The integers in the left two boxes are multiplied and the integers in the right two boxes are added and these results are then divided, as shown. The final result is placed in the bottom box. Which of the following integers cannot appear in the bottom box?



Question 2

Olympic Games are held every two years, alternating between summer and winter Olympics. For example, Rio de Janeiro held the Summer Olympics in 2016, while Pyeongchang, South Korea will host the Winter Olympics this month.

- a) Using the website <https://www.olympic.org/olympic-games>, make a list of all the countries which have hosted Olympic games from 1994 to 2016.
- b) Look up the number of countries on each continent. Then complete the table below to demonstrate the fraction of countries on each continent which have hosted Olympic games from 1994 to 2016.
(<http://www.enchantedlearning.com/geography/continents/Extremes.shtml>)

Continent	No. of Countries	No. of Host Countries	Fraction (%) Hosts/Countries
Asia	47	3	$\frac{3}{47}$ (6.4%)
Europe			
N. America			
S. America			
Australia			
Africa			

- c) If you were trying to distribute hosting countries evenly, which continent should be next to host either games? Justify your choice.

Question 3

A rectangular container with base 9 cm by 11 cm has a height of 38.5 cm. Assuming that water expands 10% when it freezes, determine the depth to which the container can be filled so that when the contents freeze, the ice does not go above the top of the container.

