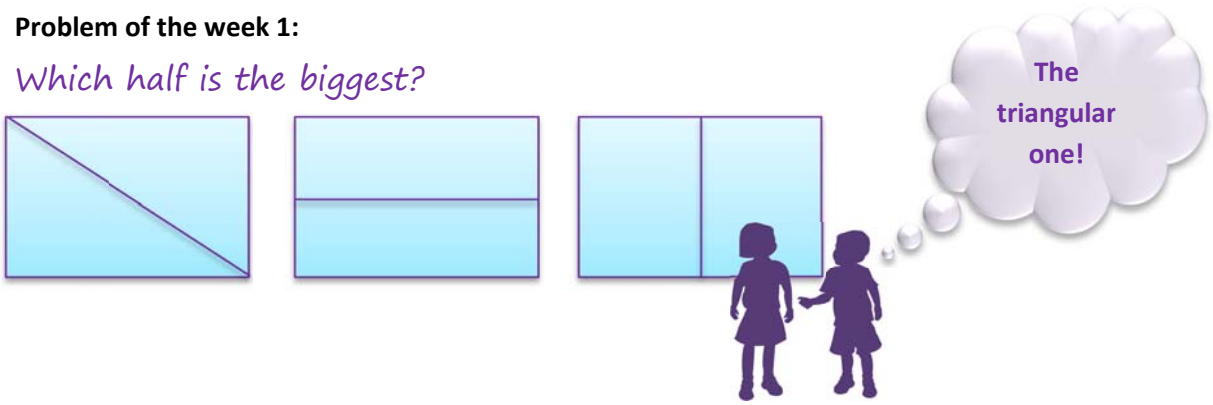
Problem of the week 1:

Which half is the biggest?



1. Take an A4 sheet of paper and hold it up in front of the class. Ask them if they could fold it to make one half. Ask for as many different halves as possible. *You can use quarters for grades 5-7 if you think halves will be too easy, but we suggest you try halves first*.
2. Cut down the fold, and tack the halves to your board. Once you have a variety of differently shaped halves, ask students which of the halves is the biggest. Try *not* to choke at this point.

   Read the whole article

3. Take a vote. Make sure that you don't suggest that the halves are the same, but wait for someone from your class to tell you. Put your hand up for each option when voting.
4. Hold up two of the halves against each other (e.g. short fat rectangle and long skinny rectangle), and as the students if there was a way that you could make them look the same. Hold your scissors up. Hopefully someone will suggest cutting part off one of the halves and rotating it around to cover the other half. Do this and ask which half is bigger now.
5. Blue-tack the identical halves to your board. Then swivel the pieces back into their original configuration and ask the question again. Again, watch out for choking!
6. Repeat the swivelling. If they still insist that the sizes are different take the cake approach: *Imagine this is a very yummy piece of chocolate cake. When I turn the cake like this (demonstrates), am I actually eating it? Am I somehow getting more cake? So is it really a different amount, or does it just look different?*
7. Ask the students who wants to change their mind from their original vote.
8. Try it again using a triangular half, or triangular quarters.

...Try this with your staff as well! Triangular quarters are lots of fun!

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