

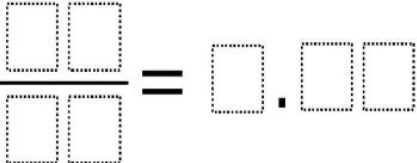




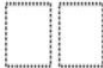



Grade 8 Math & Science Learning Opportunities

Week of June 1st

MATH

Choice Board (Middle Level – Grades 6 – 8)

<p><u>License To Solve</u></p> <p>Write down the numbers you see on 2 license plates. Create 4 math problems with these numbers. Ask a family member to solve them.</p> 	<p><u>WODB</u></p> <p>Which number does not belong and why? What other number does not belong and why? Repeat as many times as you can.</p>  <p>wodb.ca</p>	<p><u>Finding The Best Deal</u></p> <p>Determine the better deal in each case.</p> <ol style="list-style-type: none"> 8 pencils for \$2.80 Or 5 pencils for \$\$1.70 A dozen apples for \$7.20 Or 3 apples for \$1.75
<p>Using digits from 0 to 9 (at most one time each), fill in the boxes so that the fraction equals the decimal. Find as many different solutions as you can.</p>  <p>openmiddle.com</p>	<p><u>Shopping Spree</u></p> <p>Which store would you rather buy jeans from? Why? Share your reasoning with someone at home.</p> <p><u>Store A</u>  <u>Store B</u></p> <p>30% off \$30 off</p>	<p><u>Perimeter & Area</u></p> <p>What is the largest possible area (in cm²) for a rectangle with a perimeter of 120 cm?</p> <p>Sketch a triangle (include dimensions) that would have the same area.</p>
<p>Estimate how many minutes of commercial time there is in a half-hour t.v. show. Watch a show for 30 minutes and record the commercial time. How accurate was your estimate? What fraction of the show was commercial time? What percent? How much commercial time would you expect in a 1-hour show? a 2-hour show?</p> <p>Sketch a picture/model that shows your findings (ie. Circle graph).</p> 	<p>Using digits from 0 to 9 as many times as you want, fill in the boxes to create a correct number sentence.</p> <p> is 50% of  and 75% of </p> <p>openmiddle.com</p>	<p>Old Man Wrinkle</p>  <p>Old Man Wrinkle spent one-fourth of his life as a boy, one-eighth as a youth, and one-half as an active man.</p> <p>If Old Man Wrinkle spent 9 years as an old man, then how many years did he spend as:</p> <ol style="list-style-type: none"> a boy? a youth? an active man?

DIVER DOWN
Cartesian Diver

Name: _____ Class: _____ Date: _____

Question: How does a submarine change its buoyancy?

Materials:

- 2L pop bottle with a cap
- glass medicine dropper OR plastic pen cap and modeling clay
- small glass beaker
- water
- ruler

Procedure:

1. Fill the pop bottle with water, leaving roughly 3cm or less of air at the top.
2. Fill the beaker about half full of water. Using the water from the beaker, fill the medicine dropper about half full of water. If you do not have a glass medicine dropper use a plastic pen cap. Add a small glob of modeling clay to the arm of the pen cap to act as a weight.
3. Place the dropper (or pen cap) in the pop bottle and screw the bottle top on tight. The dropper/pen cap will be our “diver”. The “diver” should be floating at the top of the bottle. If it sinks, empty the pop bottle and begin again.
4. Look closely at the “diver” in the pop bottle. How much of the dropper/pen cap is filled with water and how much of it is filled with air?

5. Grasp the outside of the pop bottle firmly with two hands. Squeeze the bottle sides tight until the “diver” sinks to the bottom of the pop bottle. Why do you think this happens?

6. With the “diver” still at the bottom of the bottle, look closely at the water level inside the medicine dropper/pen cap. Has it changed? Why do you think this happens?

7. Predict what will happen when you release the pressure on the outside of the bottle. Write your prediction.

8. Release the pressure on the bottle and observe what happens to the diver. How do you think you can make the dropper/pen cap stay in the middle of the bottle?

9. **Think About It:** Ballast tanks in a submarine can be filled with either water or air. How do you think they make a submarine sink or float? Write a response.
