

Quarter 4 Week 2 Warm Ups

M o n	<p>In the United States, citizens must be at least 18 years old to vote. Write and graph an inequality to represent this situation if a represents age.</p> <p style="text-align: center;">16 17 18 19 20</p>	<p>The volume of a cube can be found using the formula $V = s^3$, where s represents the length of a side. If the side length is 3.1 m, what is the volume of the cube?</p>
T u e s	<p>Office Central sells a pack of one dozen pencils for \$3.49 or a pack of three dozen pencils for \$11.00. Which pack is a better buy?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> $\begin{array}{r} 3.49 \\ \underline{12} \\ .29 \end{array}$ </div> <div style="text-align: center;"> $\frac{11}{36} \approx .31$ </div> </div>	<p>Chloe has a square piece of fabric that is 6 feet long by 6 feet wide. If she wishes to use it to create three equal pieces of fabric, what will the area of one piece of fabric be?</p> <div style="text-align: center;"> </div>

12 FT²

h u r		
F r i	<p>It takes 45 minutes to bake 2 dozen cupcakes. At this rate, how many hours would it take to bake 8 dozen cupcakes?</p>	<p>Write an expression for "twice the quotient of f and g subtracted from one-fifth of g."</p>

M2

T2

W1

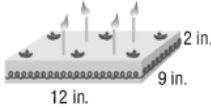
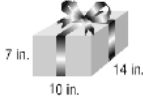
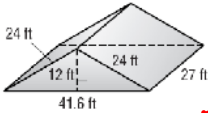
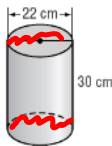
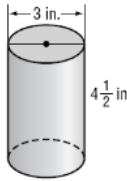
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F1

Created by E. Nash

Name: _____ Date: _____

Problem Solving #1 - Surface Area of Prisms and Cylinders

<p>1. BAKING The top and sides of the cake shown below are to be covered in frosting. Calculate the area that will be covered with frosting.</p> 	<p>2. GIFTS A birthday gift is placed inside the box shown below. What is the minimum amount of wrapping paper needed to wrap this gift?</p> 
<p>3. FARMING Phil is planning to shingle the roof on his barn shown below. How many square feet will he be shingling?</p>  <p style="color: red; font-size: 2em; margin-left: 200px;">2 L —+— □ □</p>	<p>4. FARMING Refer to Exercise 3. If one package of shingles covers 325 square feet, how many packages will Phil need to buy?</p>
<p>5. LIGHT SHOW A mirrored cylinder used in a light show is shown below. Only the curved side of the cylinder is covered with mirrors. Find the area of the cylinder covered in mirrors. Round to the nearest tenth.</p>  <p style="color: red; font-size: 2em; margin-left: 150px;">LA</p>	<p>6. SOUP Emily has the flu, so she decides to make chicken noodle soup. How many square inches of metal were used to make Emily's can of soup? Round to the nearest tenth.</p> 
<p>7. A rectangular sofa cushion is 36 inches by 30 inches by 20 inches. How many cushions can be covered with 38,400 square inches of material?</p>	<p>8. Louise is covering a rectangular shaped pillow with new fabric. If the fabric costs \$0.12 per square inch, how much money will Louise spend on the fabric? (The pillow's dimensions are 8 in. by 6 in. by 4 in.)</p>

Some problems taken from Glencoe Math Connects Course 3 Word Problem Practice

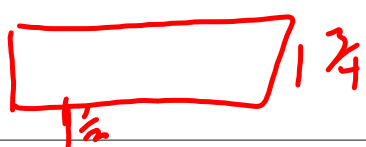
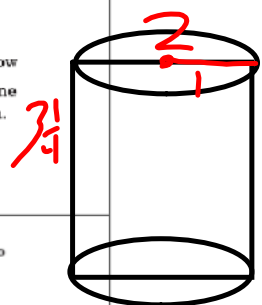
Name: _____ Date: _____

Problem Solving #2 - Surface Area of Prisms and Cylinders

~~$24 \times 18 \times 2$~~
 $18 \times 8 \times 2 = 288$
 $24 \times 8 \times 2 = 384$
 672 ft^2



<p>1. DECORATING Ms. Frank is going to wallpaper a living room with dimensions 24 feet long, 18 feet wide, and 8 feet high. What surface area does Ms. Frank need to wallpaper?</p>	<p>2. MANUFACTURING The Acme Canning Company produces cans for chicken soup. If each can has a diameter of 2 inches and a height of $3\frac{1}{4}$ inches, how much aluminum is needed to make one can? Round to the nearest hundredth.</p>
<p>3. MUSEUM A museum curator needs to order a display case for a small artifact. The case needs to be a rectangular prism and made entirely of clear plastic. The bases must each measure $1\frac{1}{2}$ feet by $1\frac{3}{4}$ feet and the sides each 3 feet high. Find the cost of the case if the clear plastic costs \$10 per square foot.</p>	<p>4. SIDING The Ramirez family is going to put vinyl siding on a shed. They will cover all four walls completely, except for the door. The siding costs \$3 per square foot. How much will the siding cost for their shed?</p>
<p>SHIPPING For Exercises 5-7, use the following information.</p> <p>FPS, a shipping company, uses a container in the shape of a triangular prism to pack blueprints, posters, and other items that can be rolled up to fit inside the container.</p> <p>Packages-R-Us uses a container shaped like a cylinder for the same purposes. The cardboard used to make each container costs the same amount per square inch.</p>	<p>5. What is the surface area of the FPS box?</p>
<p>6. What is the surface area of the Packages-R-US box?</p>	<p>7. If each company buys 100 of these packages, which company will spend less money per package? Explain.</p>



Problems taken from Glencoe Word Problem Practice Section 11-4