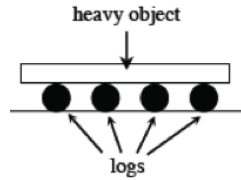
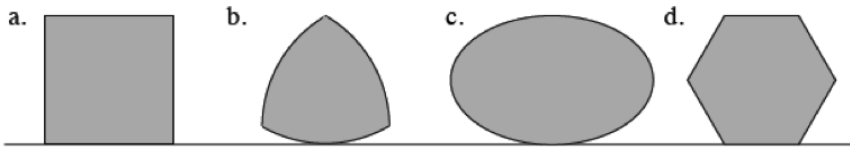


7-2. DO CIRCLES MAKE THE BEST WHEELS?



Examine the shapes below. Would logs of any of these shapes be able to roll heavy objects in a similar fashion? Be prepared to defend your conclusion!

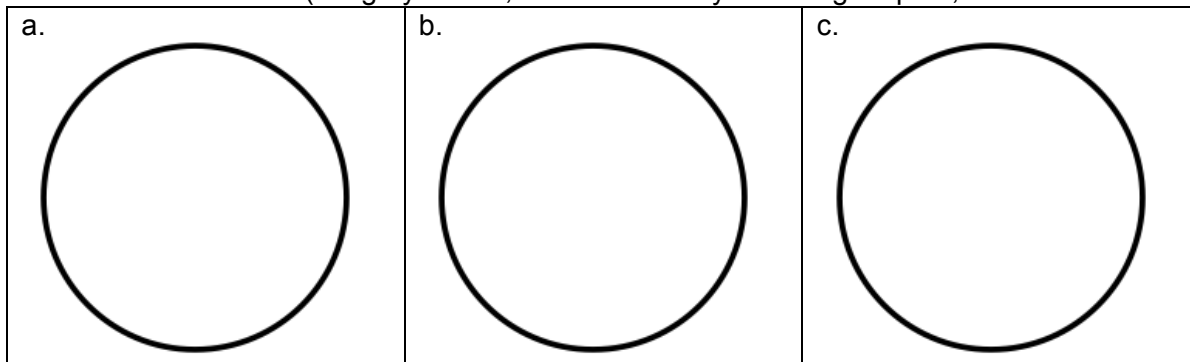


Your Opinion:

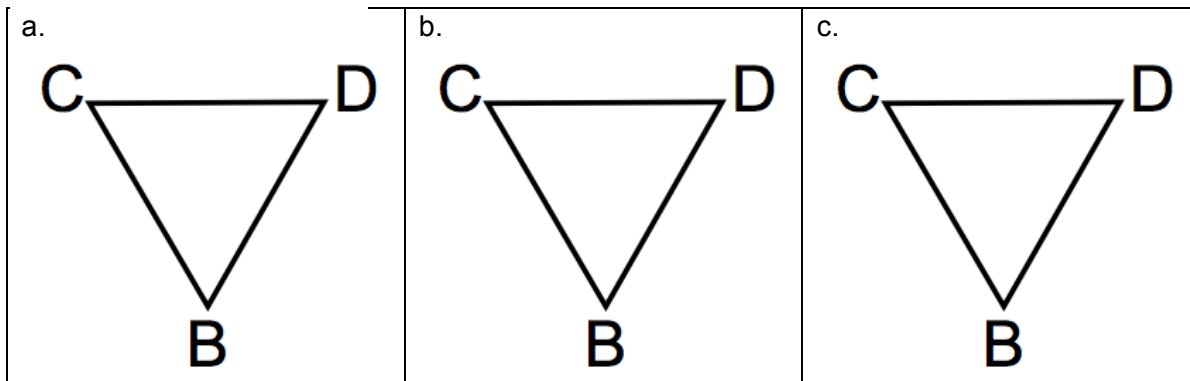
7-8. A rectangle has one side of length 11 mm and a diagonal of 61 mm. Draw a diagram of this rectangle and find its width and area.

7-12. IS THERE MORE TO THIS CIRCLE?

Use listed below circle (image you fold, label and cut by following steps a, b and c.



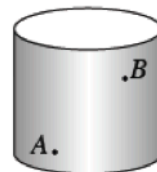
7-13. ADDING DEPTH



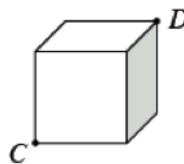
- d. Sketch the tetrahedral and tetrahedron (7-14)  
 Tetrahedral tetrahedron

7-24

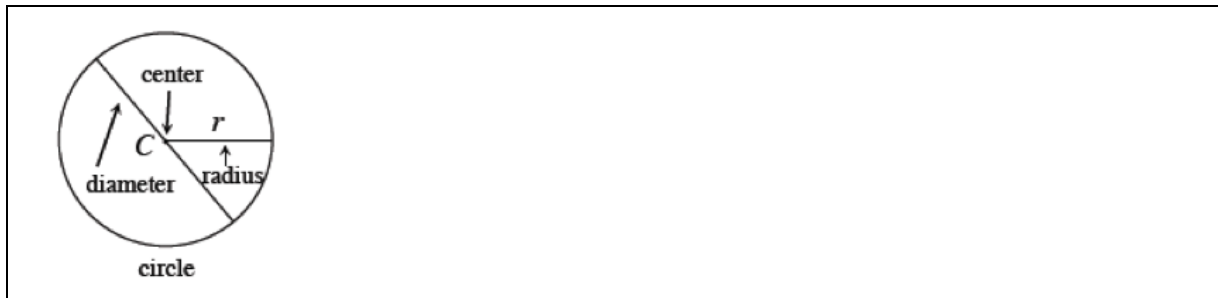
- a. In this first puzzle, Bradley decided to test what would happen on the side of a cylinder, such as a soup can. On a can provided by your teacher, find points  $A$  and  $B$  labeled on the outside of the can. With your team, determine the shortest path from point  $A$  to point  $B$  along the surface of the can. (In other words, no part of your path can go inside the can.) Describe how you found your solution.



- b. What if the shape is a cube? Using a cube provided by your teacher, predict which path would be the shortest path from opposite corners of the cube (labeled points  $C$  and  $D$  in the diagram at right). Then test your prediction. Describe how you found the shortest path.



Write formulas for area and circumference.



- 7-47. If  $\triangle ABC \cong \triangle DEC$ , which of the statements below must be true? Justify your conclusion.  
 Note: More than one statement may be true.

- a.  $\overline{AC} \cong \overline{DC}$       b.  $m\angle B = m\angle D$   
 c.  $\overline{AB} \parallel \overline{DE}$       d.  $AD = BE$   
 e. None of these are true.

