



Jakarta International  
School  
6<sup>th</sup> Grade  
Practice test-Formative  
Area and Volume- Blue

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score:  $\frac{\quad}{25}$

### Area of Triangles and Parallelograms

**1)** Ms. Strydhorst-Piers is making a quilt by stitching together triangular shaped pieces of fabric. Each piece of fabric has a base of 15cm, sides 17cm and a height of 8cm. She uses 30 pieces of fabric to make the quilt.

**a.** Find the area of one of the pieces of fabric used to make the quilt. (2pts)

**b.** Find the area of the finished quilt. (1pt)

**2)** A parallelogram has length of 12cm and height of 7cm. If the length is increased by 2cm how much will the height have to change to keep the area the same? (2pts)

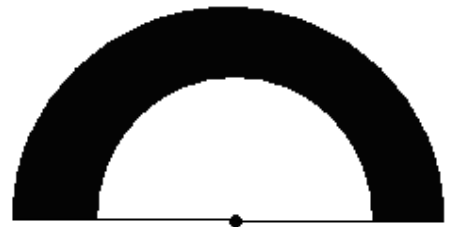
## Circumference and Area of Circles

**3)** Mrs. Carol has a lovely little fluffy dog, named Bobby. Sometimes when she goes out she ties Bobby up to a post in the garden so that he can run around in the fresh air but not run away. When Bobby is tied up, he is on a 4meter rope so that he can run around and around the post in a circle. Sometimes he runs around so much that he wears an outline of a circle in the ground.

**a.** Calculate the circumference of the circle created by Bobby running around the post. Use 3.14 for  $\pi$  (2pts)

**b.** Calculate the area of the circle that Bobby makes. Use 3.14 for  $\pi$  (2pts)

**4)** The figure shows two circles. The inner circle has a radius of 5 cm and the circumference is 2 cm away from the circumference of the outer circle. Find the shaded area. Use 3.14 for  $\pi$  (3pts)

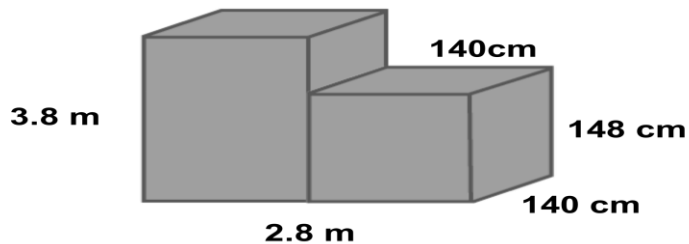


## Volume and Surface Area of Prisms

5) The diagram shows two steps leading up to a theatre stage.

a. The theatre manager is going to repaint part of the steps. He only needs to paint the faces that YOU can see.

Calculate the surface area of the steps that need to be painted. Give your answer in square meters. Round to the hundredth place. Round your final answer only, not your working. (3pts)

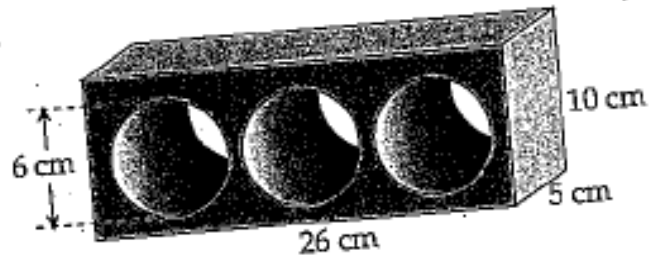


b. The theatre manager stores old costumes under the steps to save room back stage. He needs to know how much storage space there is. Calculate the total volume of the two steps. (3pts)

## Volume and Surface Area of Cylinders

6) Mr. Blackwell is making wooden cylinders for grade 8 projects. The picture below shows the block of wood with three cylinder shaped holes in it.

a. Find the volume of the remaining block of wood. Note that the 6cm applies to the diameter of the cylinder. (4pts)



b. Each of the cylinders needs to be painted. Find the surface area of one cylinder to help Mr. Blackwell with this task. (3pts)