

Process Standards Rubric

Geometry

Expectations Instructional programs from pre-kindergarten through grade 12 should enable all students to:	Exercise														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GOAL 1: Problem Solving <ul style="list-style-type: none"> build new mathematical knowledge through problem solving; solve problems that arise in mathematics and in other contexts; apply and adapt a variety of appropriate strategies to solve problems; monitor and reflect on the process of mathematical problem solving. 	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 2: Reasoning & Proof <ul style="list-style-type: none"> recognize reasoning and proof as fundamental aspects of mathematics; make and investigate mathematical conjectures; develop and evaluate mathematical arguments and proofs; select and use various types of reasoning and methods of proof. 	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 3: Communication <ul style="list-style-type: none"> organize and consolidate their mathematical thinking through communication; communicate their mathematical thinking coherently and clearly to peers, teachers, and others; analyze and evaluate the mathematical thinking and strategies of others; use the language of mathematics to express mathematical ideas precisely. 	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 4: Connections <ul style="list-style-type: none"> recognize and use connections among mathematical ideas; understand how mathematical ideas interconnect and build on one another to produce a coherent whole; recognize and apply mathematics in contexts outside of mathematics. 	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 5: Representation <ul style="list-style-type: none"> create and use representations to organize, record, and communicate mathematical ideas; select, apply, and translate among mathematical representations to solve problems; use representations to model and interpret physical, social, and mathematical phenomena. 	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drill Sheet 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drill Sheet 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

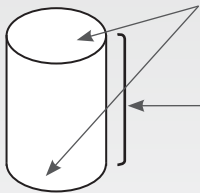
SAMPLE



Task Sheet 14

Surface Area of a Cylinder

14) To find the surface area of a cylinder, first find the area of the circles at the top and the bottom of the cylinder, then find the area of the middle part of the cylinder.



Step 1: Find the surface area of both circles.

$$\text{Surface area} = 2\pi r^2$$

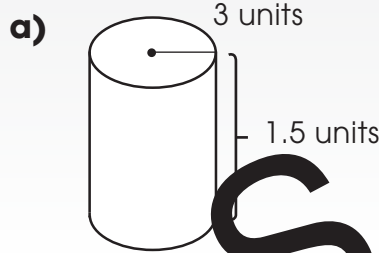
Step 2: Find the area of the middle of the cylinder.

$$\text{Surface area of the middle} = 2\pi rh$$

Step 3: Add both surface areas together to get the total surface area of the cylinder.



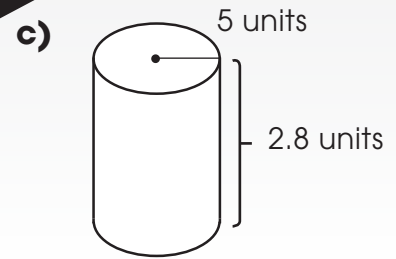
Find the surface area of each cylinder below.



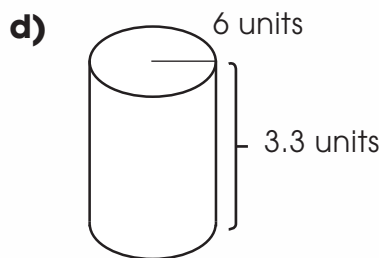
_____ square units



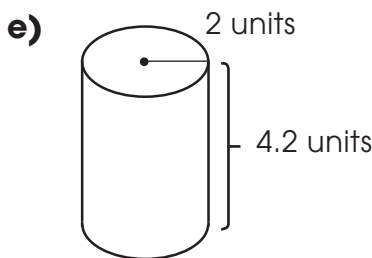
_____ square units



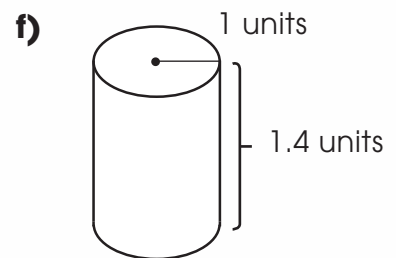
_____ square units



_____ square units



_____ square units



_____ square units

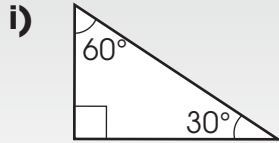
SAMPLE

NAME: _____

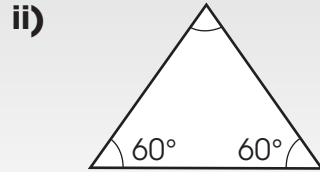


Review B

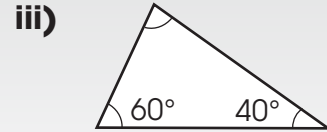
a) Find the missing angle.



_____°



_____°



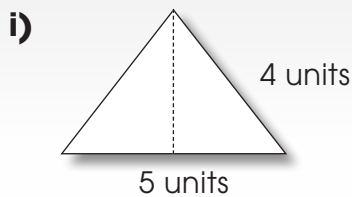
_____°

b) What are the differences between equilateral, isosceles, and scalene triangles?

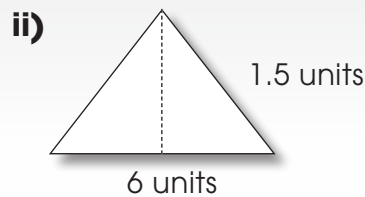
c) What are the differences between right, obtuse, and acute triangles?

d) What is the formula for finding the area of a triangle? _____

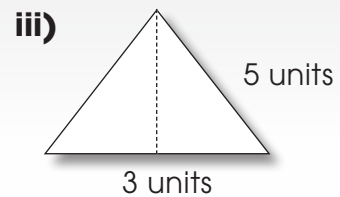
e) Find the area of the following triangles below.



_____ square units



_____ square units



_____ square units

SAMPLE

Pythagorean Theorem

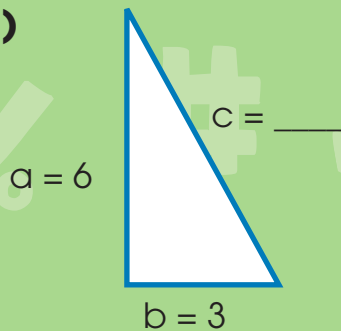


The hypotenuse of a **right triangle** is the side that is opposite the right angle, or the "long side" of the triangle. The other two sides are the "legs" of the triangle.

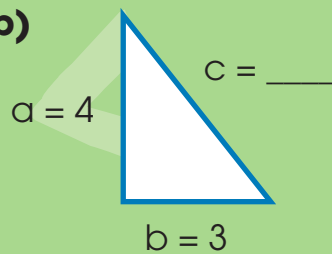
The theory is $a^2 + b^2 = c^2$ (c^2 is the hypotenuse)

Find the hypotenuse for the following triangles below.

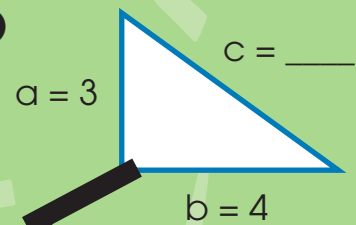
a)



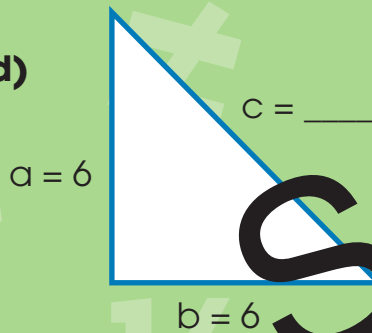
b)



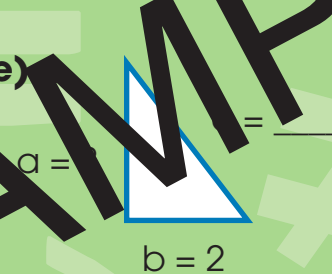
c)



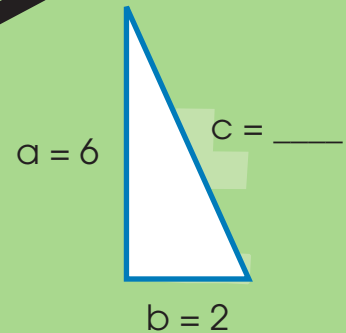
d)



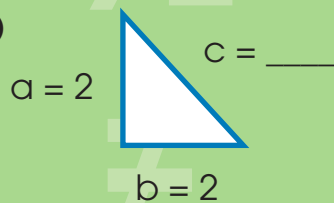
e)



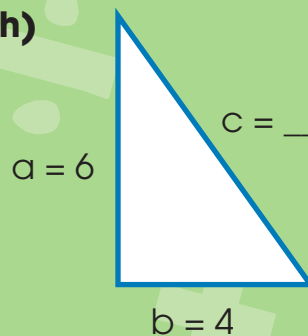
f)



g)



h)



i)

