

Name: _____ Date: _____ Period: _____

5-2 Perimeter, Circumference & Area

Standard

- B.G.C.A.1 Apply a variety of strategies to determine the area and circumference of circles after identifying necessary information.
- B.G.GMD.A.1 Use relationships involving area, perimeter, and volume of geometric figures to compute another measure.

Objectives

- SWBAT apply formulas IOT determine perimeter, area and circumference.

Key Concepts

_____ - the distance around a geometric figure.

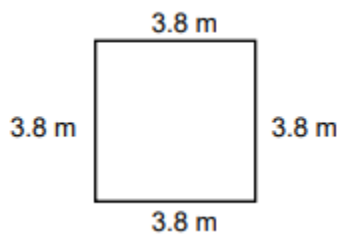
_____ - the amount it takes to cover a geometric figure.

_____ - the distance around a circle.

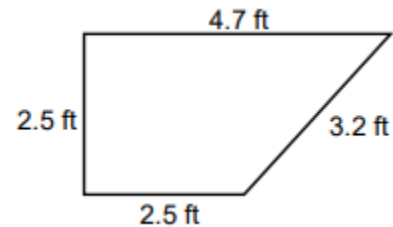
Examples

1. (I do) Find the perimeter or circumference of each. Then find the area of each. If necessary, round answers to the nearest whole number.

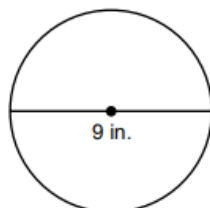
a.



b.

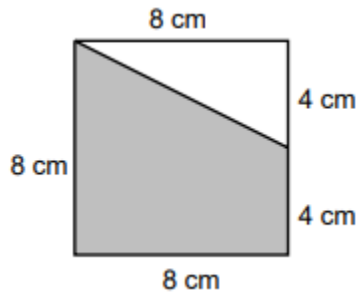


c.

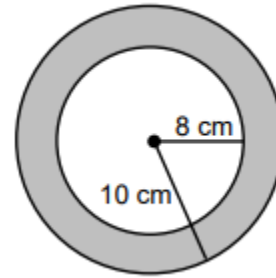


2. (We do) Find the area of the shaded region of each figure.

a.



b.

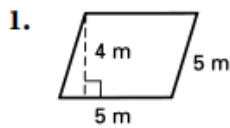


3. What is the width of the fence around an archaeological dig if the region enclosed is a rectangle with a perimeter of 68 m and a length of 24.4 m?

-----Lesson 5-2 Independent Practice/Lesson Check-----

EXERCISES

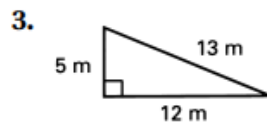
Find the perimeter or circumference of each. Then find the area.



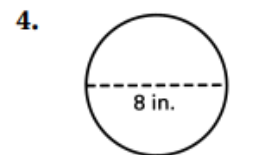
$P =$ _____
 $A =$ _____



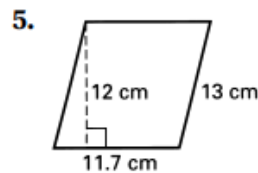
$P =$ _____
 $A =$ _____



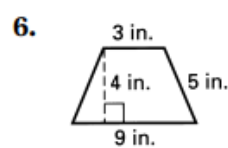
$P =$ _____
 $A =$ _____



$C =$ _____
 $A =$ _____



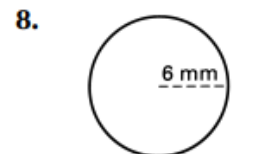
$P =$ _____
 $A =$ _____



$P =$ _____
 $A =$ _____



$P =$ _____
 $A =$ _____



$C =$ _____
 $A =$ _____

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5-3 Probability & Area

Standard

- B.G.MG.A.1 Use appropriate technology to find the mathematical model for a set of non-linear data.
- B.G.GMD.A.1 Use relationships involving area, perimeter, and volume of geometric figures to compute another measure.

Objectives

- SWBAT use area IOT determine probabilities.

Key Concepts

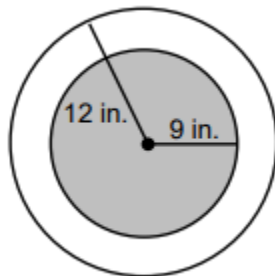
_____ - the likelihood an event will occur.

$$P(\text{any event}) = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

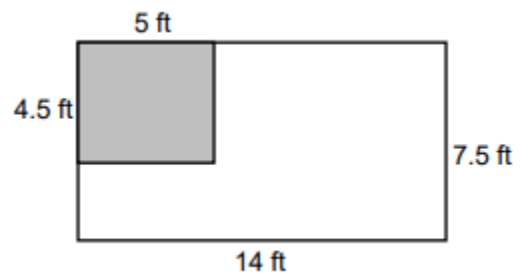
Examples

1. (I do) Find the probability that a point selected at random in each figure is in the shaded region.

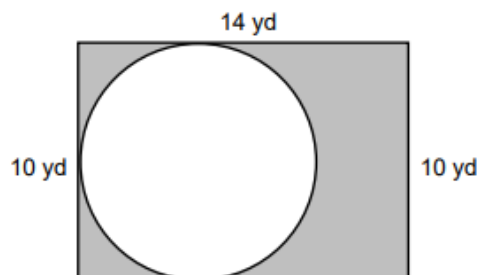
a.



b.



c.



2. (We do) A treasure chest was buried long ago beneath what is now Cordova High school property. No one knows where the chest lies. If the school property is a rectangle measuring 600 ft by 540 ft, what is the probability that the chest could be found by excavating the baseball diamond, a square with sides of 90 ft each?

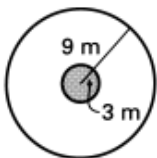
3. (They do) Twenty-five darts are randomly thrown at a circular dartboard and all of the darts land within the dartboard. Four hit the bull's-eye. If the diameter of the bulls-eye is 24 cm, what is the approximate area of the dartboard?

-----Lesson 5-3 Independent Practice/Lesson Check-----

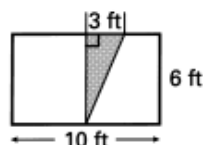
EXERCISES

Find the probability that a point selected at random in each figure is in the shaded region.

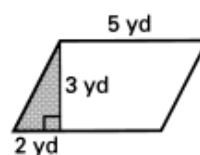
1.



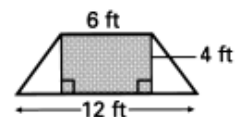
2.



3.



4.



5. The total area of Florida is 58,560 mi². Of these, 4308 mi² are inland water. If a meteor were to land somewhere in the state, what is the probability that it will splash down on the inland water?

6. The area of a yard is 420 ft². What is the probability that any leaf landing in the yard will land in a circular wading pool that has a diameter of 14 ft? Use $\frac{22}{7}$ for π .

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5-4 Irregular Shapes

Standard

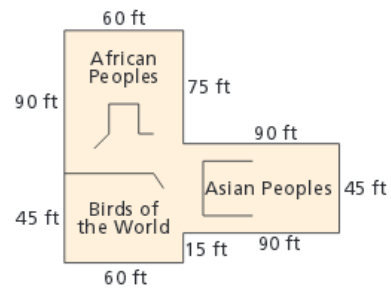
- B.G.GMD.A.3 Apply a variety of strategies using relationships between perimeter, area, and volume to calculate desired measures in composite figures (i.e., combinations of basic figures).

Objectives

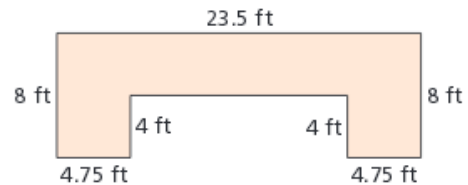
- SWBAT use area IOT determine the area if irregular shapes (or combined figures).

Examples

1. (I do) This layout of a wing at a natural museum shows the African Peoples, Asian Peoples, and Birds of the World galleries. How much carpeting is needed for this wing?

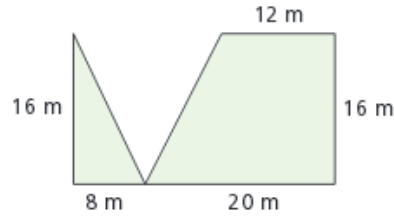


2. (I do) A display case planned for showing fragments of 3500 year old frescoes will have the shape below. If there will be 3 glass shelves, how much glass in square feet is needed?



3. (We do) An archaeological team has 30 ft of fencing with which to enclose a rectangular region. If the length and width are whole numbers, what different areas in square feet are possible?

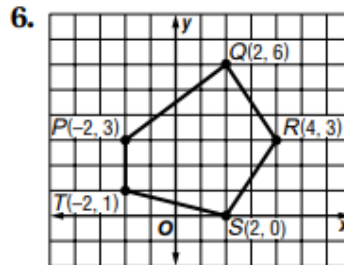
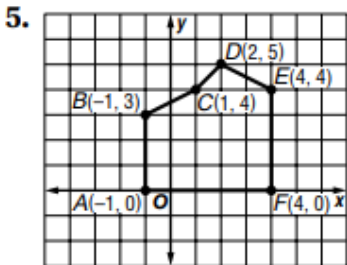
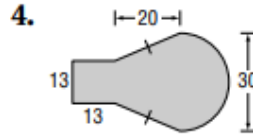
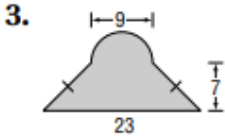
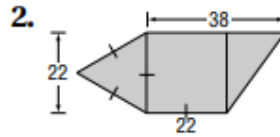
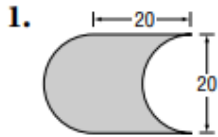
4. (They do) Find the area.



-----Lesson 5-4 Independent Practice/Lesson Check-----

EXERCISES

Find the area of each figure. Round to the nearest tenth if necessary.



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5-5 Three-Dimensional Figures

Standard

- B.G.MG.A.2 Solve problems involving surface area and volume in real-world context.

Objectives

- SWBAT analyze three-dimensional figures IOT determine the surface area and volume.

Key Concepts

_____ - a solid figure having length, width and height.

_____ - a solid figure having many plane (2-D) faces.

_____ - the polygons that make up a polyhedron.

_____ - the segments joining the faces of a polyhedron.

_____ - a point (corner) joining the segments of a polyhedron.

Examples

1. (I do) Identify the figures.

a.

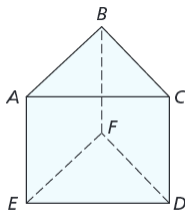


b.

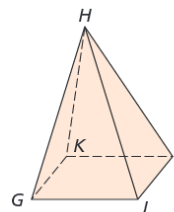


2. (I do) Identify the bases, edges and lateral faces.

a.

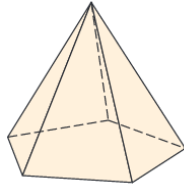


b.

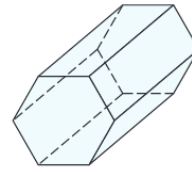


3. (We do) Name the polyhedron and state the number of faces, vertices and edges.

c.



b.

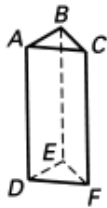


-----Lesson 5-5 Independent Practice/Lesson Check-----

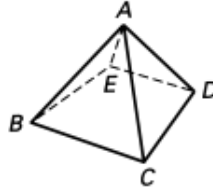
EXERCISES

Name and identify each polyhedron, each vertex and each of its bases.

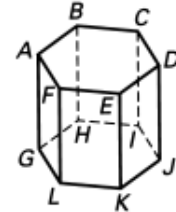
1.



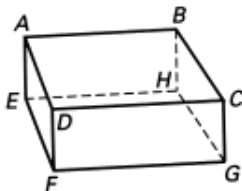
2.



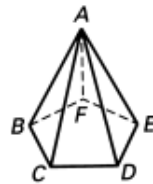
3.



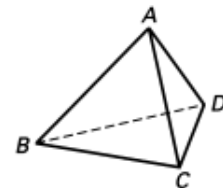
4.



5.



6.



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5-6 Surface Area of Three-Dimensional Figures

Standard

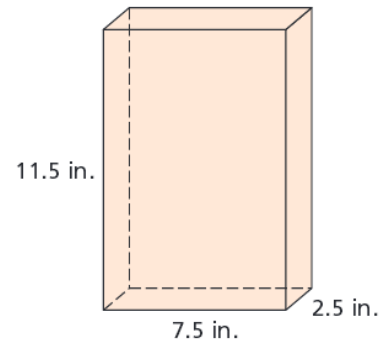
- B.G.MG.A.2 Solve problems involving surface area and volume in real-world context.

Objectives

- SWBAT analyze three-dimensional figures IOT determine the surface area and volume.

Examples

1. (I do) A box of cereal is 11.5 in. high, 7.5 in. wide, and 2.5 in. deep. What is the surface area of the box?



2. (We do) At Farrow's Ceramic Factory replicas of the Great Pyramid at Giza are made. Each model has a square base 10 cm in length, and triangular faces each with a height of 12 cm. Farrow's plans to paint the models. What is the surface area of each?
3. (We do) A can of breadcrumbs is 14 cm high and 8 cm across. What is the surface area of the can?

4. (They do) A tent in the shape of a cone is 4 m across with a slant height of 2.6m. What is the surface area of the canvas, including the floor?

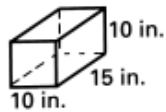
5. (They do) What is the surface area of a soccer ball with diameter of about 9 in.?

-----Lesson 5-6 Independent Practice/Lesson Check-----

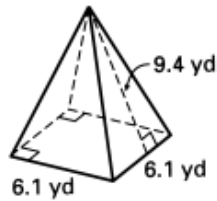
EXERCISES

Find the surface area of each figure.

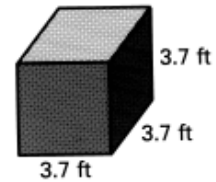
1.



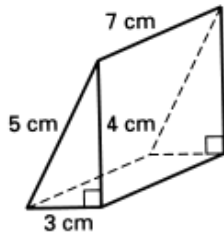
2.



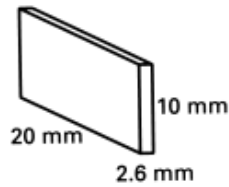
3.



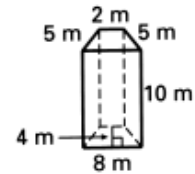
4.



5.



6.



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5-7 Volume of Three-Dimensional Figures

Standard

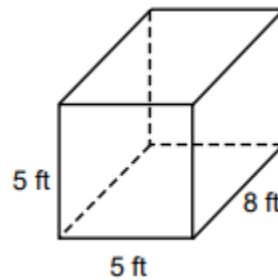
- B.G.MG.A.2 Solve problems involving surface area and volume in real-world context.

Objectives

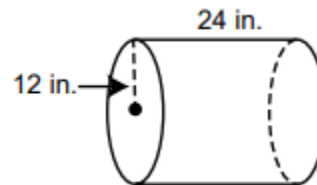
- SWBAT analyze three-dimensional figures IOT determine the surface area and volume.

Examples

1. (I do) Find the volume. Round to the nearest tenth, if necessary.

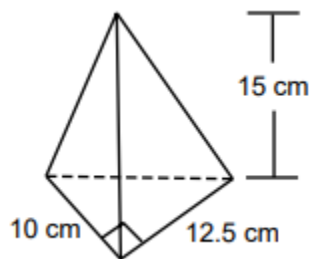


2. (I do) Find the volume. Round to the nearest tenth, if necessary.

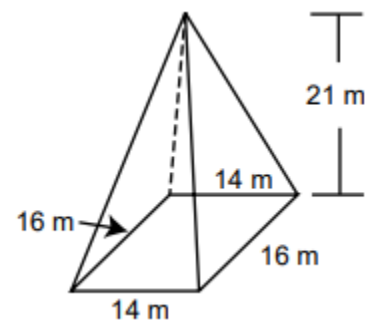


3. (We do) Find the volume. Round to the nearest tenth, if necessary.

a.

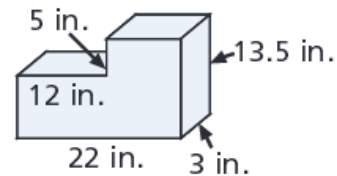


b.

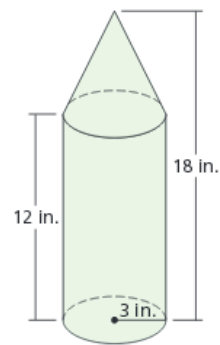


4. (We do) The only asteroid visible to the naked eye is 4Vesta, discovered in 1807. Its diameter is 323 mi. What is the volume? Assume that 4 Vesta is a sphere.

5. (They do) Find the volume. Round to the nearest tenth, if necessary.



6. A candy company decides to sell its new Blast Off candy bars in a package shaped like a rocket. The body of the rocket is shown at the right. Find the volume.

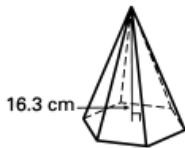


-----Lesson 5-7 Independent Practice/Lesson Check-----

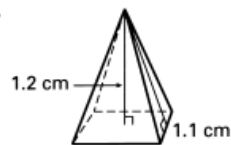
EXERCISES

Find the volume of each figure.

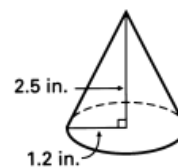
1. Area of base: 37.8 cm^2



2.

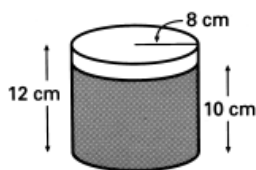


3.

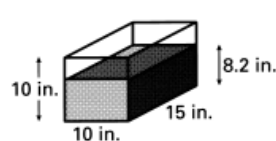


Find the volume of each container. Then find the volume of the powder left in each container.

4.



5.



6.

