Grade 7

Aligned to the Common Core

Geometry
Exam

7th Grade Mathematics Geometry

7th Grade Mathematics Geometry

REFLECTION

A. What do you feel like you understand the most about geometry?

B. What is one area you would like to...

7th Grade Mathematics Geometry

7.G.4 — 7) Rose's circular garden needs to have new soil added down for the spring. She knows the diameter of the garden is 12 feet. How much total soil will she need to purchase?

7.G.4 — 8) Determine the area and the circumference of the following image. *5 in*

7.G.5 — Write and solve an equation for x and find the measure of both angles. *5x° x°*

7.G.5 — Write and solve an equation given the following information:

A. The supplement of an angle is 45° more than the measure of the angle itself.

B. Angles 1 and 2 are complementary. The measure of angle 2 is 30° larger than the measure of angle 1.

7.G.6 — Calculate the volume of a triangular pyramid if the area of the base is 24 inches squared and the height is 8 inches.

7.G.6 — Calculate the area of the following image: *7m 12m*

7.G.1 — 1) Explain the meaning of the following: A scale on a map is 1 cm: 20 mi.

7.G.1 — 2) The scale of a drawing is 6 cm:2... scale drawing larger or smaller... actual object? Explain your...

7.G.2 — 3) Determine if the given information would form a unique triangle, many different triangles, or no triangle. Explain your reasoning.

A. 5 in, 14 in, and 10 in

B. 7 cm and 11 cm

7.G.3 — 5) Identify the figures below:

2 QUESTIONS PER STANDARD

By: Math in the Midwest

7ᵗʰ Grade Mathematics
Geometry

7.G.1

1) Explain the meaning of the following:

A scale on a map is 1 cm: 20 mi.

7.G.1

2) The scale of a drawing is 6 cm:2mm. Is the scale drawing larger or smaller than the actual object? Explain your reasoning.

7.G.2

3) Determine if the given information would form a unique triangle, many different triangles, or no triangles. Explain your reasoning.

A. 5 in, 14 in, and 10 in

B. 7 cm and 11 cm

7.G.2

4) Determine if the following statements are always true, sometimes true, or never true.

A. Angles in a triangle have the same measure.

B. A triangle can be formed given any two side lengths.

C. A triangle can be formed given any three side lengths.

7.G.3

5) Identify the figures below:
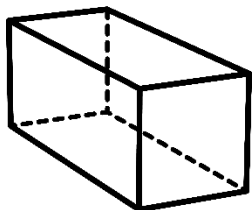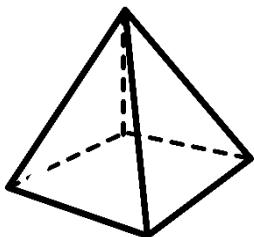
7.G.3

6) Describe the cross-section that results from the intersection of a plane and a right rectangular prism described in the following statements:

A. A plane intersects exactly three vertices of a cube.

B. A plane intersects a right rectangular prism parallel to its rectangular base.

7ᵗʰ Grade Mathematics
Geometry

7.G.4

7) Rhonda's circular garden needs to have new soil added for the spring. She knows the diameter of the garden is 12 feet. How much total soil will she need to purchase?
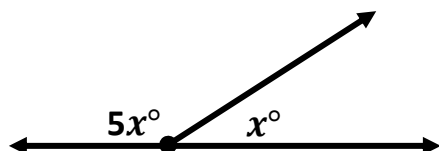
7.G.4

8) Determine the area and the circumference of the following image.

5 in
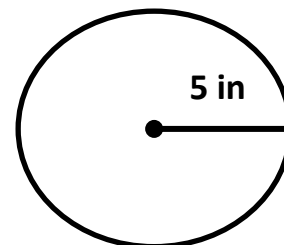
7.G.5

9) Write and solve an equation for x and find the measure of both angles.

$5x°$ $x°$

7.G.5

10) Write and solve an equation given the following information:

A. The supplement of an angle is $45°$ more than the measure of the angle itself.

B. Angles 1 and 2 are complementary. The measure of angle 2 is $38°$ larger than the measure of angle 1.

7.G.6

11) Calculate the volume of a triangular pyramid if the area of the base is 24 inches squared and the height is 8 inches.

7.G.6

12) Calculate the area of the following image:
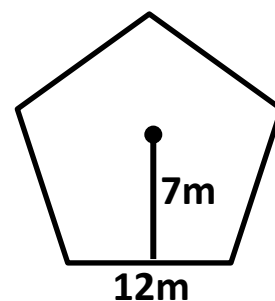
7m

12m

Name: _____   Date: _____   Hour: _____

7th Grade Mathematics Geometry

REFLECTION

A. What do you feel like you understand the most about geometry?

_____

_____

_____

_____

B. What is one area you would like to understand better about geometry?

_____

_____

_____

_____

C. CIRCLE the effort (10: MAXIMUM EFFORT) you gave and put a BOX (10: YOU COULD TEACH THIS TO SOMEONE ELSE) around how you would rate your UNDERSTANDING of the content using the number line below.

1   2   3   4   5   6   7   8   9   10

Name: _____ Date: _____ Hour: _____

7th Grade Mathematics
Geometry

7.G.1

1) Explain the meaning of the following:

A scale on a map is 1 cm: 20 mi.

For every **1 cm on the map there are 20 miles of actual distance.**

7.G.1

2) The scale of a drawing is 6 cm:2mm. Is the scale drawing larger or smaller than the actual object? Explain your reasoning.

Larger because the first value, drawing length, is larger than the second value, actual length

7.G.2

3) Determine if the given information would form a unique triangle, many different triangles, or no triangles. Explain your reasoning.

A. 5 in, 14 in, and 10 in

Unique because 5 + 10 = 15 and 15 is greater than 14

B. 7 cm and 11 cm

Many different triangles because only two segments were given

7.G.2

4) Determine if the following statements are always true, sometimes true, or never true.

A. Angles in a triangle have the same measure.

Sometimes True

B. A triangle can be formed given any two side lengths.

Always True

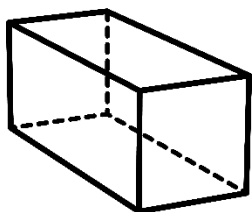**C. A triangle can be formed given any three side lengths.**

Sometimes True

7.G.3

5) Identify the figures below:
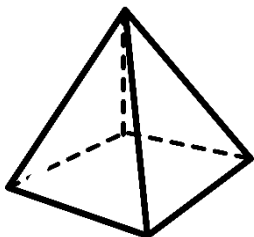
Square Pyramid

Right Rectangular Prism

7.G.3

6) Describe the cross-section that results from the intersection of a plane and a right rectangular prism described in the following statements:

A. A plane intersects exactly three vertices of a cube.

Triangle

B. A plane intersects a right rectangular prism parallel to its rectangular base.

Rectangle

Name: _____ Date: _____ Hour: _____

7th Grade Mathematics
Geometry

7) Rhonda's circular garden needs to have new soil added for the spring. She knows the diameter of the garden is 12 feet. How much total soil will she need to purchase?
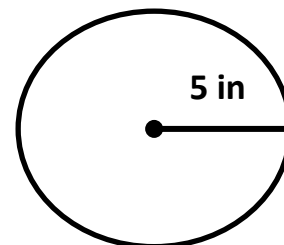
113.04 square feet

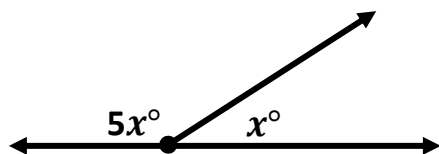**8)** Determine the area and the circumference of the following image.

Area = 78.5 square inches

Circumference = 31.4 inches

5 in

Write and solve an equation for x and find the measure of both angles.

$5x°$ $x°$

$$5x + x = 180$$
$$6x = 180$$
$$x = 30$$

Angles are $30°$ and $150°$

Write and solve an equation given the following information:

A. The supplement of an angle is $45°$ more than the measure of the angle itself.

x + (x + 45) = 180   x = 67.5

B. Angles 1 and 2 are complementary. The measure of angle 2 is $38°$ larger than the measure of angle 1.

x + (x + 38) = 90   x = 26

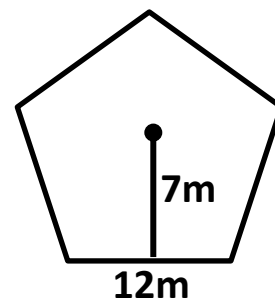Calculate the volume of a triangular pyramid if the area of the base is 24 inches squared and the height is 8 inches.

64 inches cubed

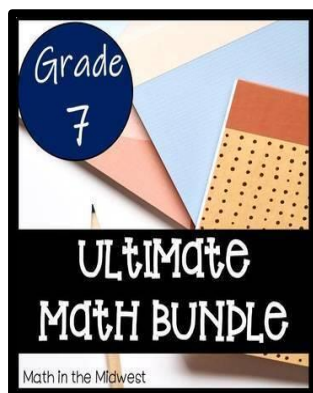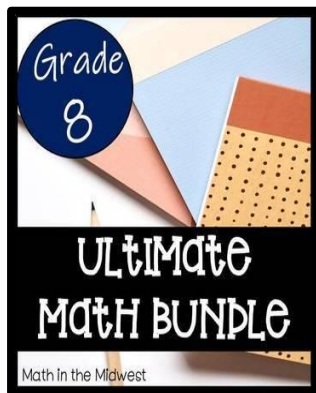Calculate the area of the following image:
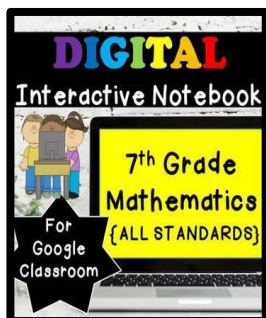
210 square meters

7m
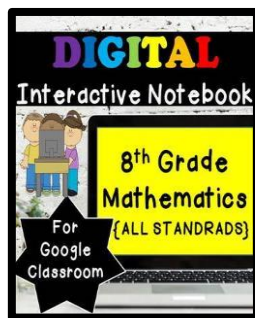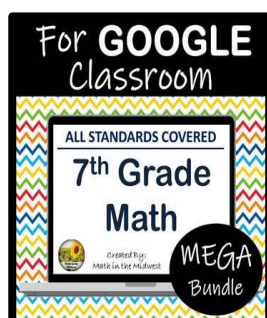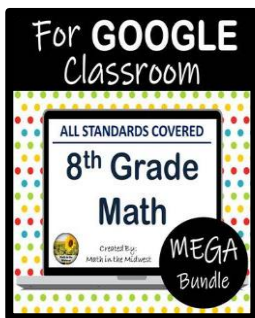
12m

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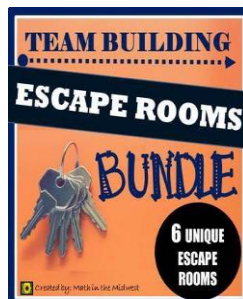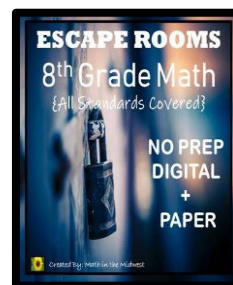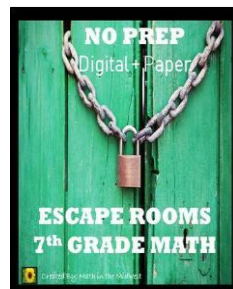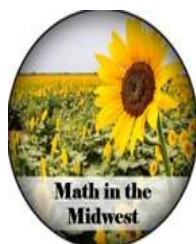## All you have to do is click on the images below.

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