Name:_____

PPN Testing Program

EXCELSIOR

2019 – 2020

Bi-Weekly Quiz 2

Grade 8

Grade 8 Mathematics Reference Sheet

CONVERSIONS

1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 5,280 feet
1 mile = 1,760 yards
1 mile = 1.609 kilometers

1 kilometer = 0.62 mile
1 pound = 16 ounces
1 pound = 0.454 kilogram
1 kilogram = 2.2 pounds
1 ton = 2,000 pounds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon = 3.785 liters
1 liter = 0.264 gallon
1 liter = 1,000 cubic centimeters

FORMULAS

|	
Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Circle	$A = \pi r^2$
Circle	$C = \pi d$ or $C = 2\pi r$
General Prisms	$V = Bh$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$
Cone	$V = \frac{1}{3}\pi r^2 h$
Pythagorean Theorem	$a^2 + b^2 = c^2$

Session 1

TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Read each question carefully and think about the answer before making your choice.

- You have been provided with mathematics tools (a ruler, a protractor, and a calculator) and a reference sheet to use during the test. It is up to you to decide when each tool and the reference sheet will be helpful. You should use mathematics tools and the reference sheet whenever you think they will help you to answer the question.

1

The figure shown will be reflected across the x-axis and then reflected across the y-axis.
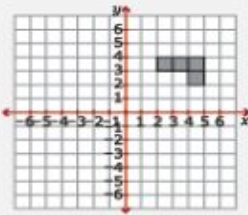
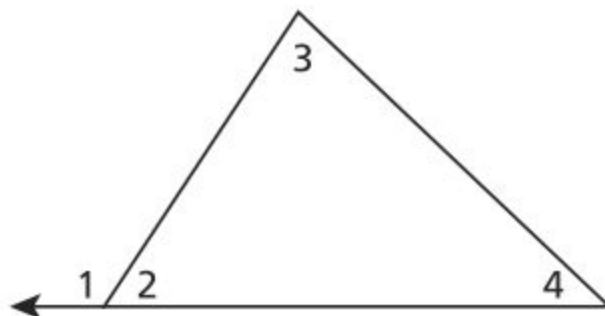**Which graph shows the figure after the transformations?**

A.

C.

B.

D.
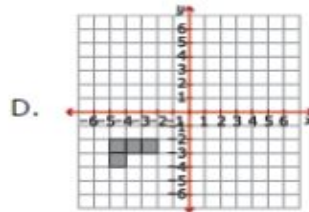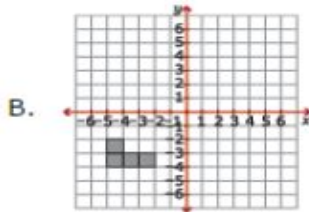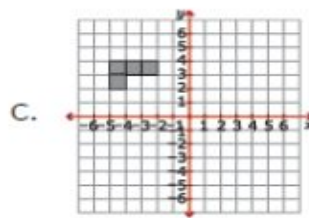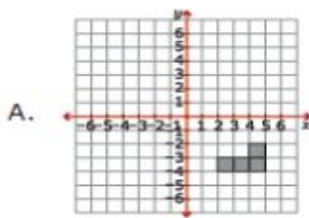
2

Which set of angle measures could be the interior angles of a triangle?

A   90°, 90°, 90°

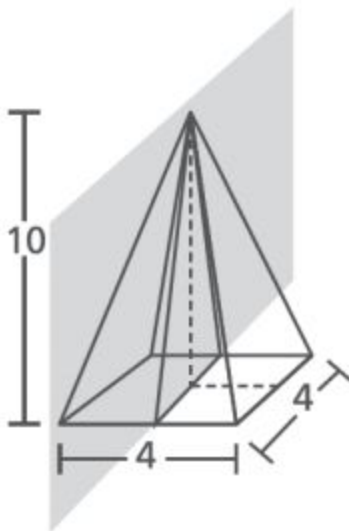B   25°, 15°, 140°

C   40°, 50°, 60°

D   80°, 80°, 200°

3

Mya claims $(m\angle 3 + m\angle 4) = m\angle 1$, as shown in the triangle below.

Which equations explain why Mya's claim must be true?

A $(m\angle 1 + m\angle 2) = 90°$ and $(m\angle 3 + m\angle 4) = 90°$

B $(m\angle 1 + m\angle 2) = 180°$ and $(m\angle 3 + m\angle 4) = 180°$

C $(m\angle 1 + m\angle 2) = 90°$ and $(m\angle 3 + m\angle 4 + m\angle 2) = 90°$

D $(m\angle 1 + m\angle 2) = 180°$ and $(m\angle 3 + m\angle 4 + m\angle 2) = 180°$

4

The dimensions of a square right pyramid are shown below.

The pyramid is sliced by a plane that passes vertically through the top vertex and is perpendicular to the base. What is the resulting two-dimensional shape and the area of the plane section?

A   a triangle with an area of 20 square units

B   a triangle with an area of 40 square units

C   a rectangle with an area of 16 square units

D   a rectangle with an area of 40 square units

5

The measures of the angles in triangle UVW are shown in the diagram below.
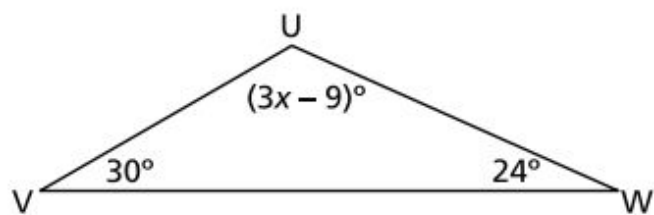
What is the value of *x*?

A   21

B   39

C   45

D   126

6

Square ABCD is located on a coordinate plane. The coordinates for three of the vertices are listed below.

- A $(2, 7)$
- C $(8, 1)$
- D $(2, 1)$

Square ABCD is dilated by a scale factor of 2 with the center of dilation at the origin, to form square $A'B'C'D'$. What are the coordinates of vertex B'?

Explain how you determined your answer.

_____

_____

_____