# Supplemental Practice

## for

# GEOMETRY

## Packet #3

The material in this packet is to be used as extra practice for students who would like to extend their learning once they have completed the Choice Boards for their grade level.

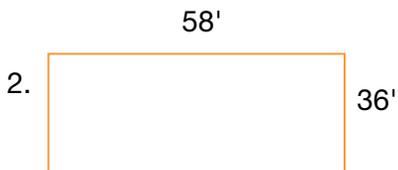The expected time frame for this practice is approximately 2 weeks.

**Task: Area & Perimeter Exit Slip**

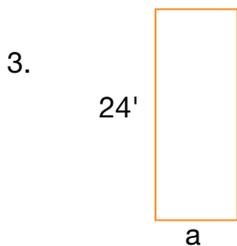DIRECTIONS: Calculate the perimeter and the area of each rectangle.

1.

17'

12'

Perimeter = _____

Area = _____

2.

58'

36'

Perimeter = _____

Area = _____

3.

24'

a

Perimeter = _____

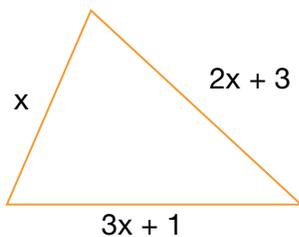Area = _____

4. A rectangle has an area of 2,130' and a width of 30', find its length and perimeter.

_____

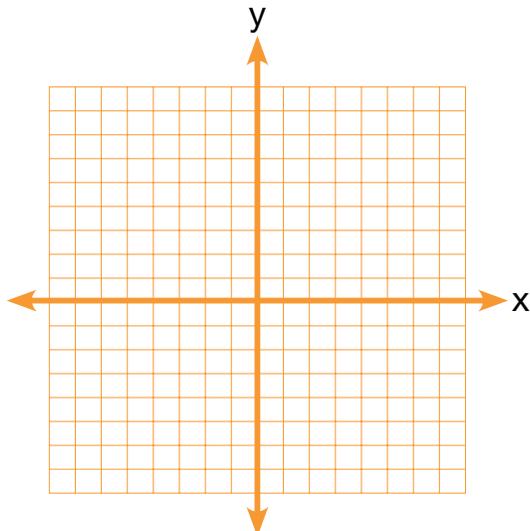_____

5. The perimeter of the triangle below is 52 cm. Find the length of each side of the triangle. Show your calculations.

$x$

$2x + 3$

$3x + 1$

**Task: Quadrilateral Activity**

1. Points A(1, 3), B(-3, 1), C(-1, -3), D(3, -1) form a square

   a. Graph the points and connect them.



   b. List as many properties of a square as you can.
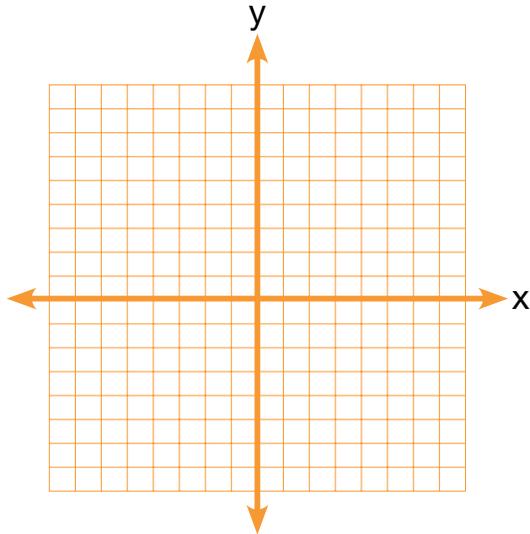
   c. Show algebraically that the property assigned to your group is true for this square and all squares.
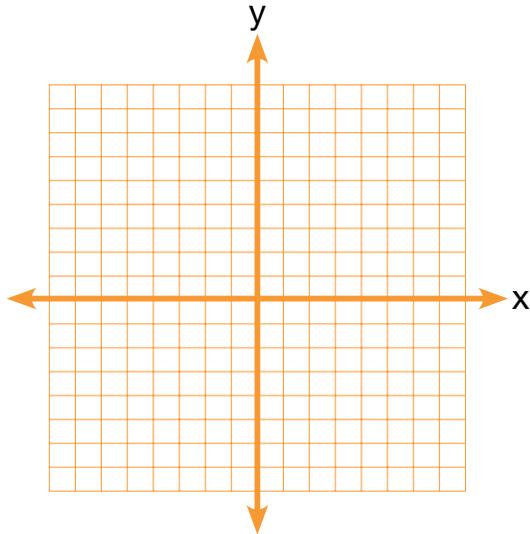
   d.  Find the area and perimeter of ABCD.

2. Consider the points F(-4, -1), G(-2, -5), H(4, -2) and J(2,2).

a. Graph the points.



b. What type of quadrilateral is FGHJ? Justify your reasoning.

3. Consider the points K(-2, -1), L(-1, 2), M(2, 4) and N(1,1).

    a. Graph the points.



    b. What type of quadrilateral is KLMN? Show your work and justify your reasoning.
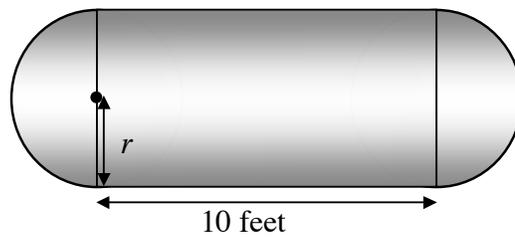
**Task: Propane Tank Activity**

# Propane Tanks

People who live in isolated or rural areas have their own tanks of natural gas to run appliances like stoves, washers, and water heaters.

These tanks are made in the shape of a cylinder with hemispheres on the ends.



10 feet

The Insane Propane Tank *C*ompany makes tanks with this shape, in different sizes.

The cylinder part of every tank is exactly 10 feet long, but the radius of the hemispheres, $r$ , will be different depending on the size of the tank.

The company want to double the capacity of their standard tank, which is 6 feet in diameter.

What should the radius of the new tank be?                          _____

Explain your thinking and show your calculations.

_____

_____

_____

_____