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Use AngLegs to model the triangles shown. Write the scale factor for Triangle 2.

1. Original Triangle


Triangle 2


The scale factor of Triangle 2 is $\qquad$ .

Using AngLegs, build a triangle with the legs named. Then build a triangle with a scale of $3: 1$. Sketch the models.
2. orange, yellow, and purple

Draw each figure using the scale factor given.
3. scale factor of 2

4. scale factor of 3


2 cm

Name

Challenge! Triangle B has a scale factor of $2: 1$ to Triangle A. Which triangle is larger and by how much? Draw a picture.
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Use the AngLegs shown. Determine whether you can build a triangle.
1.


Can you build a triangle? $\qquad$

Using AngLegs, try to make at least one triangle. Draw the triangle(s) or write an explanation if no triangle can be made.
2. Angles: $30^{\circ}, 60^{\circ}, 90^{\circ}$
3. Sides: orange, orange, yellow
4. Angles: $30^{\circ}, 30^{\circ}, 60^{\circ}$
5. Sides: blue, green; Angle between: $45^{\circ}$

Name

Challenge! Can you define a triangle by naming its three angles? Explain.
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Use Relational GeoSolids to model each cylinder. Use a ruler to find the diameter of the base. Find the circumference of the base. Use 3.14 for $\pi$.
1.

2.


Draw a circle that has each diameter. Find the circumference of the circle. Use 3.14 for $\pi$.
3. 3 inches
4. 11 centimeters

Find the circumference of each circle. Use 3.14 for $\pi$.
5.

6.

7.


Name

Challenge! Explain the meaning of $\pi$ in terms of the parts of a circle. How is the circumference of a circle related to $\pi$ ?
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Use Fraction Circles to model the circle. Use a Centimeter Grid to find the area of the circle.
1.


Draw each circle described. Find the area of the circle. Use 3.14 for $\pi$.
2. $8-\mathrm{cm}$ radius
3. 2-inch diameter

Find the area of each circle. Use 3.14 for $\pi$.
4.

5.

6.


Name

Challenge! Determine the area of a circle on grid paper by arranging its sections into a figure having a length and width. Describe the length. Describe the width.
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Use an XY Coordinate Pegboard to model the irregular figure. Divide the shape into triangles and a rectangle. Find the area of the irregular figure.
1.


Area triangle $\qquad$ sq units
rectangle $\qquad$ sq units triangle $\qquad$ sq units

Area of figure $\qquad$ sq units

Using an XY Coordinate Pegboard, model an irregular figure. Sketch the model.
Find the area of the irregular figure.
2.


Find the areas of the shapes into which you can divide your figure.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Area of figure $\qquad$ sq units

Find the area of each figure.
3.

4.


Name

Challenge! Why do you divide an irregular figure into other shapes to find its area? Draw a picture to help.
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Use Pattern Blocks and 1-inch Triangular Grid Paper to build each figure shown. Find the number of triangles covered. Write the area of the figure in triangular units.

2.


Using Pattern Blocks and 1-inch Triangular Grid Paper, build a quadrilateral that has each area given. Sketch the model.
3. 20 triangular units

4. 30 triangular units


Name

Challenge! Explain how a hexagon formed using two trapezoids can have the same area as a hexagon formed using six equilateral triangles. Draw a picture to help.
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