



Makes Maths Fun

# Level 6

## 2D SPACE

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

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## 2D Space

Level 6 is designed for students in their sixth year at school often called Year 5. Students will manipulate, classify and draw two-dimensional shapes and describe their side and angle properties.

**Knowledge:** Students will complete the table of 2D shapes' properties.



Students who demonstrate proficiency in this activity move on to Comprehension.



Students stop here as they require additional teacher support to master this activity.

**Comprehension:** Students will use tangram pieces to make 7 different shapes.



Students who demonstrate proficiency in this activity move on to Application.



Students stop here if time has run out or they require additional support with this activity.

**Application:** Students will cut squares into different sizes.



Students who demonstrate proficiency in this activity move on to Analysis.



Students stop here if time has run out or they require additional support with this activity.

**Analysis:** Students will create congruent shapes.



Students who demonstrate proficiency in this activity move on to Synthesis.



Students stop here if time has run out or they require additional support with this activity.

**Synthesis:** Students will use straws to make 2D shapes.

**Evaluation:** Suggested questions provide a starting point for discussions related to 2D Space.



Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.



All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

Name: \_\_\_\_\_

# Knowledge

Students will complete the table of 2D shapes properties.

Shape	Drawing	Edges	Vertices	Lines of Symmetry
Circle	••••• ••••• ••••• ••••• •••••			
Triangle	••••• ••••• ••••• ••••• •••••			
Square	••••• ••••• ••••• ••••• •••••			
Rectangle	••••• ••••• ••••• ••••• •••••			
Pentagon	••••• ••••• ••••• ••••• •••••			
Hexagon	••••• ••••• ••••• ••••• •••••			
Octagon	••••• ••••• ••••• ••••• •••••			
Trapezium	••••• ••••• ••••• ••••• •••••			
Rhombus	••••• ••••• ••••• ••••• •••••			
Parallelogram	••••• ••••• ••••• ••••• •••••			

Knowledge  
Comprehension  
Application  
Analysis  
Synthesis  
Evaluation

2D Space - Level 6 - Students will classify, draw and describe the sides and angles of 2D shapes.



Let's Try This Again



Progress To Comprehension

Name: \_\_\_\_\_

# Comprehension

Using the 7 given tangram pieces make 6 different shapes and draw them in the space below ie.




2D Space - Level 6 - Students will classify, draw and describe the sides and angles of 2D shapes.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation



Let's Try This Again

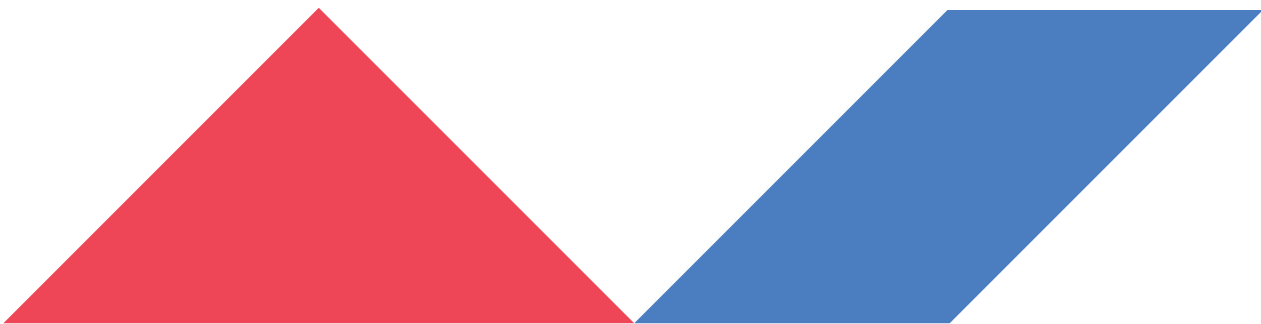
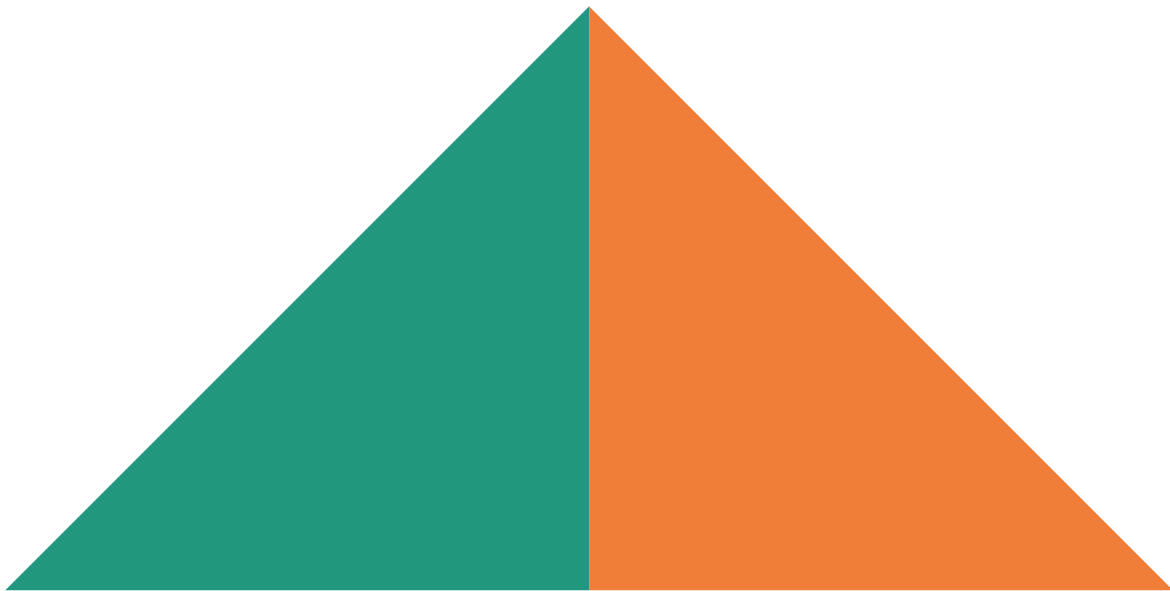


Progress To Application

Name: \_\_\_\_\_

# Comprehension part 2

## Tangram pieces



Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation

2D Space - Level 6 - Students will classify, draw and describe the sides and angles of 2D shapes.



Let's Try This Again

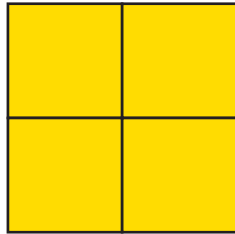


Progress To Application

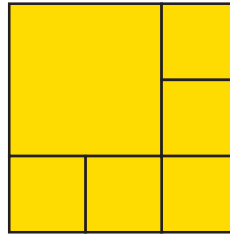
Name: \_\_\_\_\_

# Application

A square can be cut into many smaller squares such as:

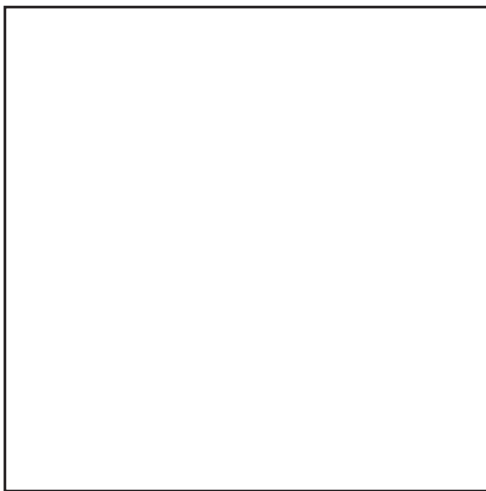


OR

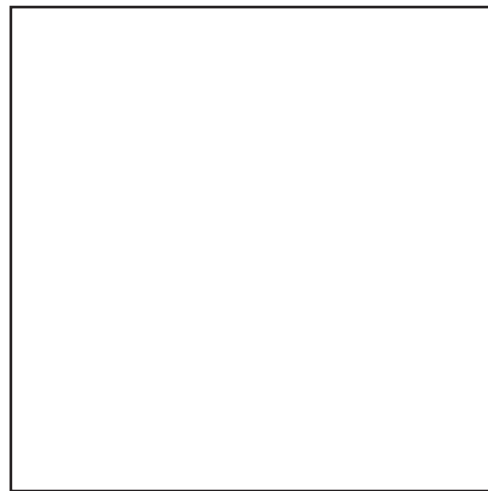


See if you can divide each square below into the required number of smaller squares.

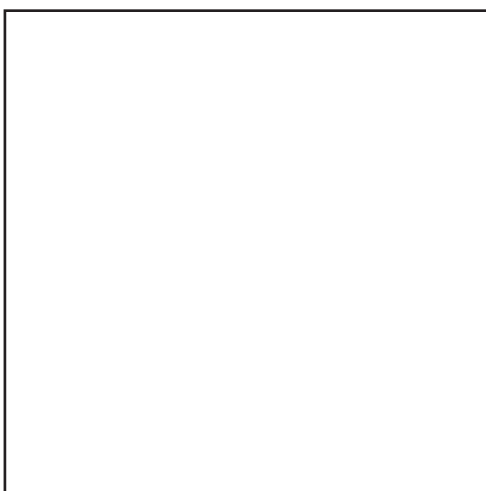
7 Squares



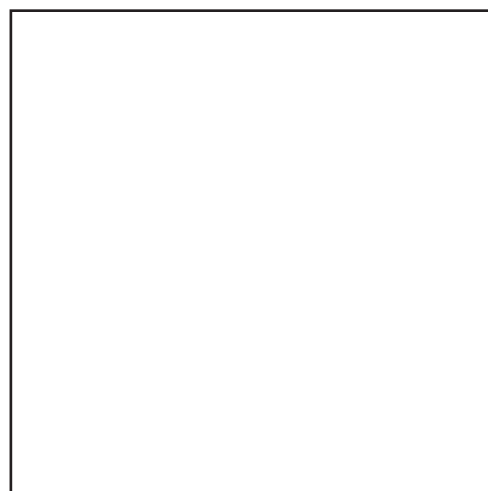
8 Squares



9 Squares



10 Squares



Let's Try This Again



Progress To Analysis

Name: \_\_\_\_\_

# Analysis

See if you can divide each 4 x 4 dot grid below into 2 congruent parts. A congruent part is when both sides are the same. 1 has been done for you.




Let's Try This Again



Progress To Synthesis

Name: \_\_\_\_\_

# Synthesis

For this activity you will need up to 12 straws or headless match sticks. See if you can use the given number of straws or headless matches to make each shape. Draw the shape in the space provided.

3 Triangles from 7 Straws

5 Triangles from 11 Straws

5 Squares from 12 Straws

1 Triangle from 4 Straws

2D Space - Level 6 - Students will classify, draw and describe the sides and angles of 2D shapes.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation



Let's Try This Again



Progress To Evaluation



# Evaluation

The following questions and activities are provide as a starting point for fun discussions related to 2D Space. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the 2D Space activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.



Which shapes are the easiest to draw?



Use the 2D shape information to have students guess your chosen shape using the least information possible.



Use the internet to look up "World Freehand Circle Drawing Competition".



See if students can draw a perfect circle.



Compare students' tangram pictures and use the internet to find more shapes they could make.



Share students' cutting squares, congruent shapes and straw shapes and see if there were any differences between their answers.

