$\qquad$
$\qquad$

## 12 Practice Test

## For \#1 to \#4, circle the best answer.

1. Which regular polygon cannot be used to tile a plane?
A square

B triangle

C hexagon

D pentagon

2. Polygons can be used to make a tessellation.

The interior angles must add up to $\qquad$ ${ }^{\circ}$ where the vertices of the polygons meet.
A $90^{\circ}$
B $180^{\circ}$
C $270^{\circ}$
D $360^{\circ}$
3. Which polygon can be used to make a tessellation?
A regular pentagon

B regular hexagon

C regular heptagon

D regular octagon

4. How many different polygons were used to make this design?

A 1
B 2
C 3
D 4

Name: $\qquad$ Date: $\qquad$

## Short Answer

5. Decide if each statement is true or false.

Circle TRUE or FALSE.
If the statement is false, rewrite it to make it true.
a) Tessellations need more than 2 polygons to make a design. TRUE or FALSE
$\qquad$
$\qquad$
b) Tessellations can be made if the interior angles of the polygons equal exactly $360^{\circ}$ where the polygons meet. TRUE or FALSE
$\qquad$
$\qquad$
c) Rotations cannot be used to make tessellations. TRUE or FALSE
$\qquad$
$\qquad$
6. Can Jamie make a tessellation using this triangle? Circle YES or NO. Explain your answer.

7. a) What type of polygon is used to make this design?

Circle PARALLELOGRAM or RECTANGLE or QUADRILATERAL.
b) What transformation is used in the pattern?

$\qquad$ Date: $\qquad$
8. Describe how you would make this tessellation.

$\qquad$
$\qquad$
$\qquad$
$\qquad$
9. Make an Escher-style tessellation using an equilateral triangle or a square.


## WRAP IT UP!

You are going to make a mosaic design to hang in your room.
You must include at least 2 different shapes and 1 transformation.
a) Shape 1: $\qquad$
Shape 2: $\qquad$
b) Type of transformation: $\qquad$

c) List the materials you will need to make your pattern.
$\qquad$
$\qquad$
d) Make your mosaic design on a separate sheet of paper.

e) After you have completed your design, write a short paragraph about it on a separate sheet of paper.

- Describe the different shapes and transformations you used to make your mosaic.
- Explain why you chose the shapes, transformation, materials, and colours that you used.

