Geometry

Unit Test

Section A

1. Circle the points in the following positions (connecting the dots first, if necessary):
   a) 3 ● ● ●  b) 3 ● ● ●  c) 3 ● ● ●  d) 3 ● ● ●
      2 ● ● ●
      1 ● ● ●
      1 2 3
   Column 1

   1 2 3
   Row 2

   (1,3)
   (3,2)
   (1,3)
   (3,2)
   (1,3)
   (3,2)

2. Circle the points in the following positions:
   a) 3 ● ● ●  b) C ● ● ●  c) 2 ● ● ●  d) 2 ● ● ●
      2 ● ● ●  B ● ● ●
      1 ● ● ●  X Y Z
      A B C
      A X Y Z
   (B,2)
   (X,C)
   (0,1)
   (2,0)

3. Graph each set of ordered pairs and join the dots to form a polygon. Identify the polygon drawn:
   a) 5
      4
      3
      2
      1
      0
      0 1 2 3 4 5
   A (0,2)  B (0,4)  C (4,4)  D (4,2)
   A (2,0)  B (1,3)  C (3,3)  D (4,0)
   This polygon is a ____________________.
   This polygon is a ____________________.

4. Write the coordinates of the following points:
   A ( , )  B ( , )
   C ( , )  D ( , )
   E ( , )  F ( , )
   G ( , )  H ( , )
Geometry

Unit Test

Section B

5. Slide each shape 4 boxes to the right. (Start by putting a dot on one of the corners of the figure. Slide the dot four boxes right, then draw the new figure.)

   a) 
   b) 

6. Slide each figure 5 boxes to the right and 2 boxes down:

   a) 
   b) 

7. Draw the reflection (or flip) of the shapes below:

   a) 
   b) 
   c) 

8. Give two reasons why this picture does not show a reflection:

   [Diagram of a figure with a dashed line through it]
Section B (continued)

9. Show where the arrow would be after each turn:
   a) ¼ turn clockwise
   b) ½ turn counter clockwise
   c) ¼ turn clockwise
   d) ½ turn counter clockwise

10. Show what the figure would look like after the rotation. First rotate the dark line, then draw the rest of the figure:
   a) ¼ turn clockwise
   b) ½ turn clockwise
   c) ¾ turn counter clockwise
   d) ¼ turn counter clockwise

11. Colour or shade in the sections of the left-hand square using at least 3 colours or shadings. Then create a border design by rotating the square ¼ turn clockwise around the bottom right corner.
12. Shapes B, C, and D were obtained from shape A by using two transformations. Write the correct letter in the blank, and describe each transformation. For rotations, mark the centre of the rotation, for reflections, draw the mirror line.

____ : Reflection and rotation
B:

____ : Rotation and slide
C:

____ : Reflection and slide
D:
**Geometry**

*Unit Test*

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**Section C**

13. Compare the sets of shapes below. *Name* the shapes first, and then write a paragraph outlining how they are the *same* and how they are *different*:

a)

![Diagram of shapes](image)

<table>
<thead>
<tr>
<th>Name</th>
<th>i –</th>
<th>ii –</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Different</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b) Name i – ii –

### Same

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>i –</td>
<td></td>
</tr>
<tr>
<td>ii –</td>
<td></td>
</tr>
</tbody>
</table>

### Different

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Complete the following property chart:

<table>
<thead>
<tr>
<th>Number of...</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>edges</td>
<td>vertices</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shape</th>
<th>Name</th>
<th>Number of...</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Shape 1" /></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image2.png" alt="Shape 2" /></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="Shape 3" /></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. If you know how many sides the base of a prism has, how can you tell how many vertices the prism has? Explain.

16. Draw the front, top and side view of the figure given by this mat plan.

![Diagram of a figure with labeled sides and numbers: 1, 2, 1, 3]