



Warm Up Grade 8

May 2, 2016

Test Tomorrow

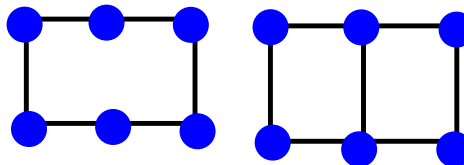


## Test Outline

(Allowed to use the blocks during a test)

### 8 Multiple Choice

-remember that I will put lines in the views if they are not on the same level.



are different

### 6 Short Response

1&2) Sketch the front, top, and side views of this object and mat plan

3) Given an isometric drawing of an object. **Use square dot paper.** (Attached on final page) **Draw the new front, top, and side views of the object after each rotation.**

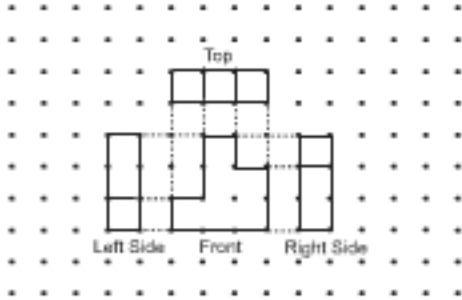
4) In the design below, identify each transformation. (May want to sketch a picture to explain but also use words)

#5) Which of these polygons tessellate? State Yes or No THEN Prove with by creating a tessellation?(Use tracing paper)

6b) Given  $K \rightarrow A$  explain the **transformations** in the tessellation. Be clear **which transformation was completed** (include point of rotation and where the reflection line is). (You may want to sketch a picture to help you explain you Transformation)

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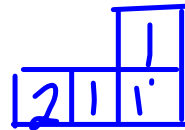
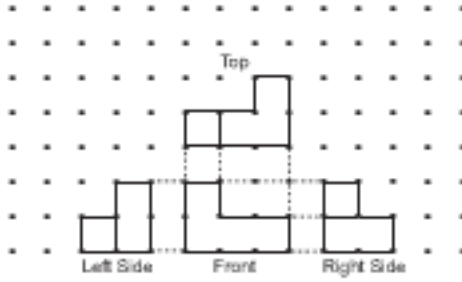
1. a)



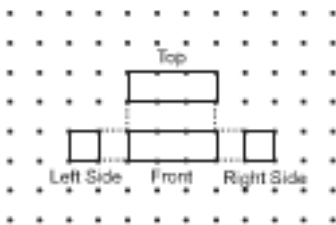
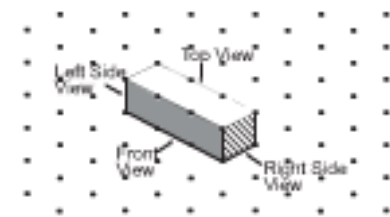
Mat Plan



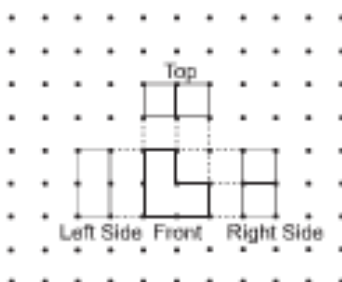
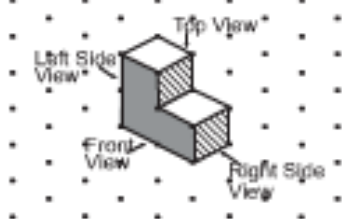
b)



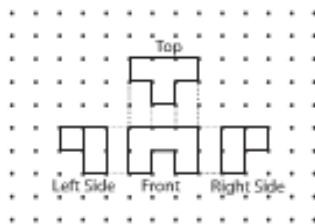
2. a)



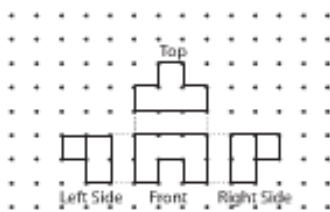
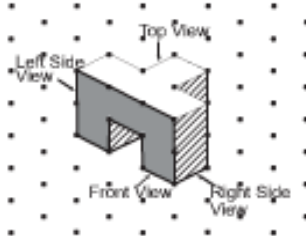
b)



3. a) Predictions may vary.

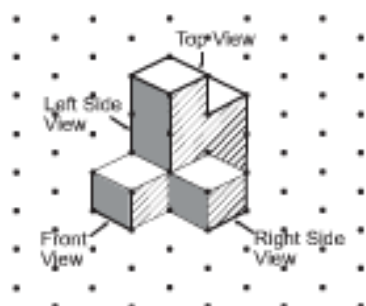


b)



4. a) The object was rotated horizontally  $90^\circ$  clockwise, or  $270^\circ$  counterclockwise.  
 b) The object was rotated horizontally  $90^\circ$  clockwise, or  $90^\circ$  counterclockwise.  
 c) The object was rotated horizontally  $180^\circ$ .

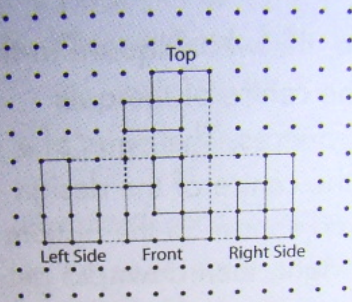
5.



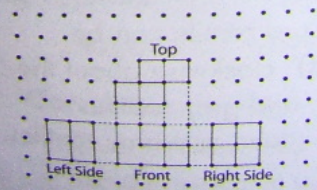
I can rotate the object to compare the views of the object with the given views.

6. I eliminated Object B because it only has a height of 2 linking cubes. The top view of Objects A and C matched, so I then looked at the right side views. The right side view of Object A did not match as the change in depth was not correct. So, I knew Object C had the given views.

7. Object A:



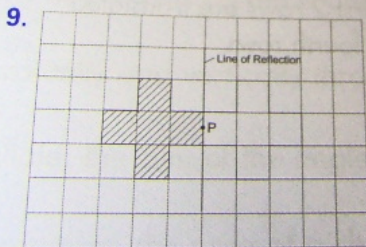
Object B:



the object with

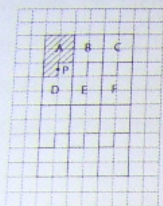
of  
the  
range  
e

- 8. a) Image D
- b) Image C
- c) Image A
- d) Image B



The image after each transformation is the same.

- The image after each transformation is the same.
10. a) b) Answers may vary. For example:



In the first row, Shape A is translated right to get Shapes B and C. To make the second row, the shaded shape is rotated  $180^\circ$  about P to get Shape D. Shape D is then translated right to get Shapes E and F. Translate the first 2 rows down to get the third and fourth rows.

Down am  
 For each side of the octagon, the side is translated down 1 unit to get the next side of the octagon. This process is repeated until all sides are translated down 1 unit to get the next side of the octagon.

11. a) b)

Shape A is translated down to get Shapes B, C, and D. Shape A is translated down 1 unit then reflected in a vertical line to get Shape E. Shape E is translated down to get Shapes F, G, and H. This part of the tessellation is then translated 5 units right.

11. a) No, it is not possible. Each angle in a regular octagon measures  $135^\circ$ . No combination of  $135^\circ$  angles will have a sum of  $360^\circ$ .

b)

c)

12.

12. In the first row, the shaded shape is translated right each time to get Shapes A and B. To get the second row, the shaded shape is rotated  $180^\circ$  about P to get Shape C. Then Shape C is translated right to get Shapes D, E, and F. The first 2 rows are translated down to get the third and fourth rows.

13. a)

b)

14. Answers top left to design is green pt are red

Shape C does not tessellate because there is an outside angle of  $19^\circ$  to fill. The only angle that will go here is the  $14^\circ$  angle, but there will be a gap. There is no angle that measures  $5^\circ$ .

14. Answers will vary. For example, the white square in the top left can be rotated about the centre of the quilt design to get the other corner squares. The pairs of green parallelograms around the centre of the design are related by reflection. The red square in the bottom left can be translated up, then right, then down, to get the other red squares. This design can be described using many different rotations and reflections.

15. Answers will vary. The red reptile can be translated to get the other red reptiles. Each red reptile can be rotated  $120^\circ$  clockwise and  $240^\circ$  clockwise about the point shared by the red, green, and grey reptiles (the knee or the eye) to get the green and grey reptiles.

16. Answers will vary. For example:

Shape A is translated 10 units right to get Shape B, and 5 units left and 5 units down to get Shape C, and 10 units down to get Shape D.  
 Shape A can be reflected in a horizontal line through the centre of Shape C to get Shape D. There are no possible rotations as all shapes have the same orientation. Under a translation and a reflection, the size of a shape does not change. The shape and its image are congruent. So area is conserved.

# Class/Homework

tomorrow

Test Tuesday, May 3

5-9 if you weren't done last day

Monday

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Study for the TEST