



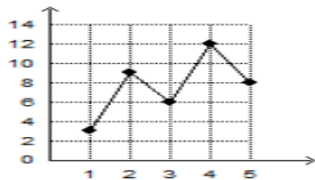
Warm Up Grade 8

Date: _____

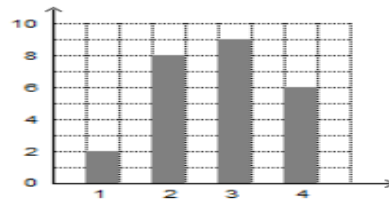


1. Which type of graph is most suitable for showing the depth of water in a pond over a period of time?

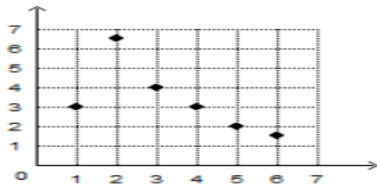
A.



C.



B.



D.



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*1. Each shape has area 8 cm^2 . Under a transformation, area is conserved. This means that all the shapes in the tessellation have the same area.

3. Answers may vary.

- i) a) Shape A is translated to the right to get Shape C.
b) Shape A is reflected in the side shared by Shapes A and B to get Shape B.
c) Shape A is rotated 180° about the vertex shared by Shapes A and D to get Shape D.
-

- ii) a) Shape A is translated to the right to get Shape B.
b) Shape A is reflected in the side shared by Shapes A and C to get Shape C.
c) Shape A is rotated 180° about the midpoint of the side shared by Shapes A and B to get Shape B.
-

- iii) a) Shape A is translated up to get Shape C.
b) Shape A is reflected in the side shared by Shapes A and H to get Shape H.
c) Shape A is rotated 90° clockwise about the vertex shared by Shapes A and B to get Shape E.

shared by shapes A and E to get Shape E.

4. Answers may vary.

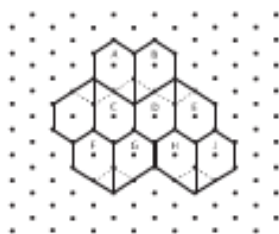
- i)
 - a) Shape A is translated to the right and down to get Shape E.
 - b) Shape A is reflected in the side shared by Shapes A and D to get Shape D.
 - c) Shape A is rotated 60° counterclockwise about the vertex shared by Shapes A and E to get Shape D.
- ii)
 - a) Shape A is translated down to get Shape D.
 - b) Shape A is reflected in the side shared by Shapes A and D to get Shape D.
 - c) Shape A is rotated 180° about the vertex shared by Shapes A and E to get Shape E.

5. Answers may vary.

Label the shape to the right of the shaded shape with the letter A, then continue to label with letters, moving in a clockwise direction.

- a) The shaded shape is reflected in the side shared by the shaded shape and Shape A to get Shape A. Shape A is rotated 90° clockwise about the vertex shared by Shapes A and E to get Shape B. Shape B is translated 1 unit right to get Shape C. Shape C is rotated 90° clockwise about the vertex shared by Shapes B and D to get Shape D. Shape D is translated 1 unit left to get Shape E. Shape E is reflected in the side shared by Shapes E and F to get Shape F. Shape F is translated 1 unit left to get Shape G.
- b) The shaded shape is reflected in the side shared by the shaded shape and Shape A to get Shape A. Shape A is rotated 180° about the vertex shared by Shapes A and B to get Shape B. Shape B is reflected in the side shared by Shapes B and C to get Shape C. Shape C is rotated 180° about the vertex shared by Shapes C and D to get Shape D. Shape D is reflected in the side shared by Shapes D and E to get Shape E.
- c) The shaded shape is rotated 90° clockwise about the vertex shared by all shapes to get Shape A. Shape A is rotated 90° clockwise about the same vertex to get Shape B. Shape B is rotated 90° clockwise about the same vertex to get Shape C.

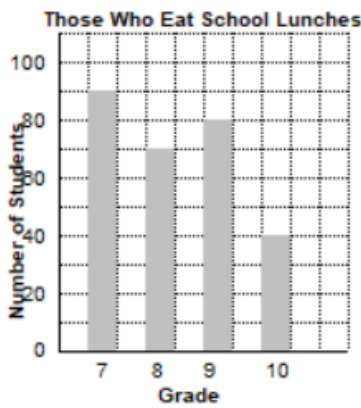
6.



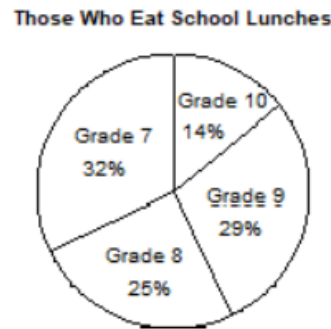
- a) The shaded shape is translated right to get Shape D. Shape A is translated left and down to get Shape F; and right and down to get Shape H. Shape B is translated left and down to get Shape G; and right and down to get Shape J. Shape C is translated right to get Shape E. Shape D is translated left to get the shaded shape. Shape E is translated left to get Shape C. Shape F is translated right to get Shape H; and right and up to get Shape A. Shape G is translated right and up to get Shape B; and right to get Shape J. Shape H is translated left to get Shape F; and left and up to get Shape A. Shape J is translated left to get Shape G; and left and up to get Shape B.
- b) Shapes A and B, the shaded shape and Shape C, Shapes C and D, and Shapes D and E are reflected in the side that is shared by each pair of shapes. The shaded shape and Shape E are reflected in the side shared by Shapes C and D. Shapes F and G, Shapes G and H, and Shapes H and J are reflected in the side that is shared by each pair of shapes. Shapes F and J are reflected in the side shared by Shapes G and H.
- c) Yes, under a translation or reflection, the area of a shape is conserved. The shape and its image are congruent, so they have the same area.

#2

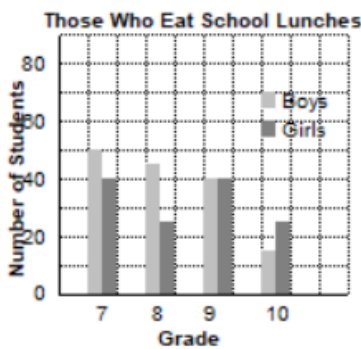
Graph A



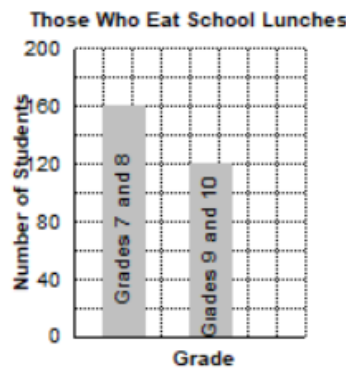
Graph B



Graph C



Graph D



- 2 Use the 4 School Lunch graphs above.
 Which type of graph is most appropriate for finding the total number of girls who eat school lunches?
 A. Graph A B. Graph B **C. Graph C** D. Graph D

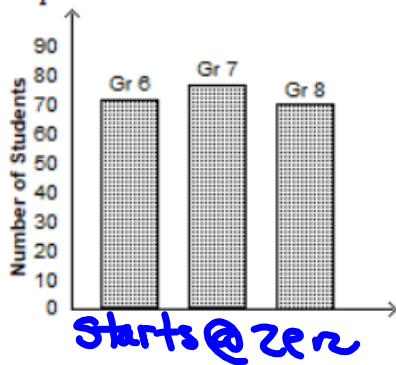
- 3 Use the 4 School Lunch graphs above.
 Which type of graph is most appropriate for finding the number of Grade 9 students who eat school lunches?
A. Graph A B. Graph B C. Graph C D. Graph D

- 4 Use the 4 School Lunch graphs above.
 Which type of graph is most appropriate for finding the percent of Grades 8 and 9 students who eat school lunches?
 A. Graph A **B. Graph B** C. Graph C D. Graph D

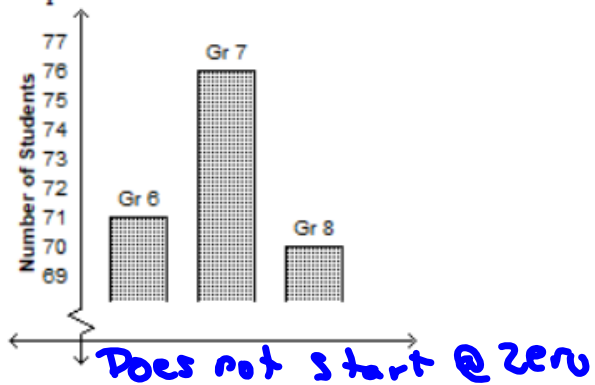
- Use the 4 School Lunch graphs above.
 5 Which type of graph is most appropriate for finding the total number of students who eat school lunches?
 A. Graph A B. Graph B C. Graph C **D. Graph D**

3. These 2 graphs show the number of students getting an average mark of 80 or higher in each grade at Glenwood Middle School.

Graph A



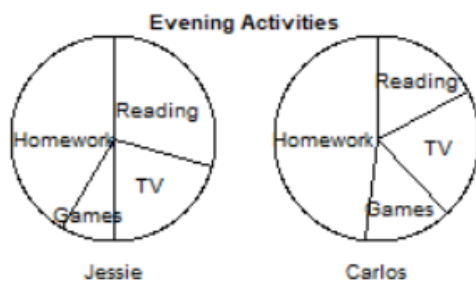
Graph B



Which statement is true?

- A. The 2 graphs are exactly the same.
- B. Graph A exaggerates the number of students getting 80 or higher.
- C. Graph B shows greater changes in the number of students getting 80 or higher.
- D. Graph B exaggerates the differences in the number of students getting 80 or higher.

- 4 These graphs show how 2 students spend their evenings.
Can you tell from the graphs which student spends more time on homework? Explain your answer.



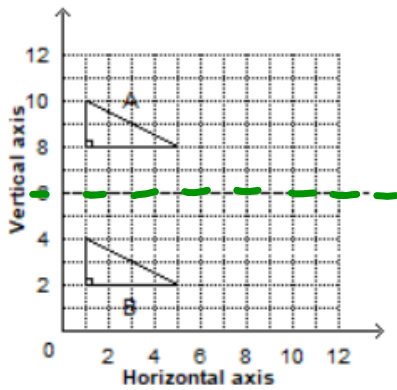
Can only tell
% of time

ANS:

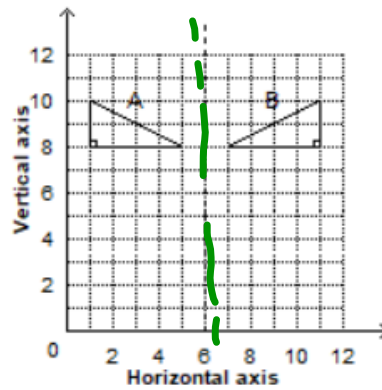
No, you cannot tell the actual time spent on each activity from these graphs.

5 $A \rightarrow B$
 Triangle B is the image of Triangle A after a reflection in a vertical line through the point (6, 0).
 Which diagram shows the correct position of Triangle B?

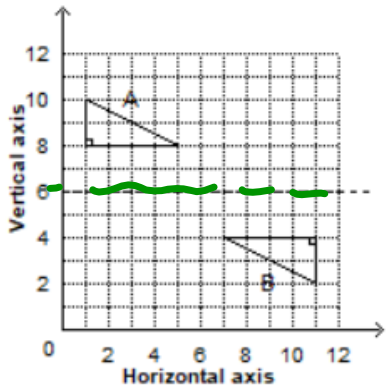
X



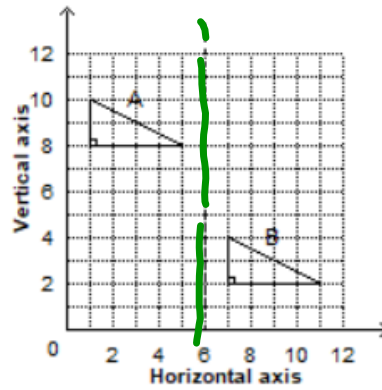
C.



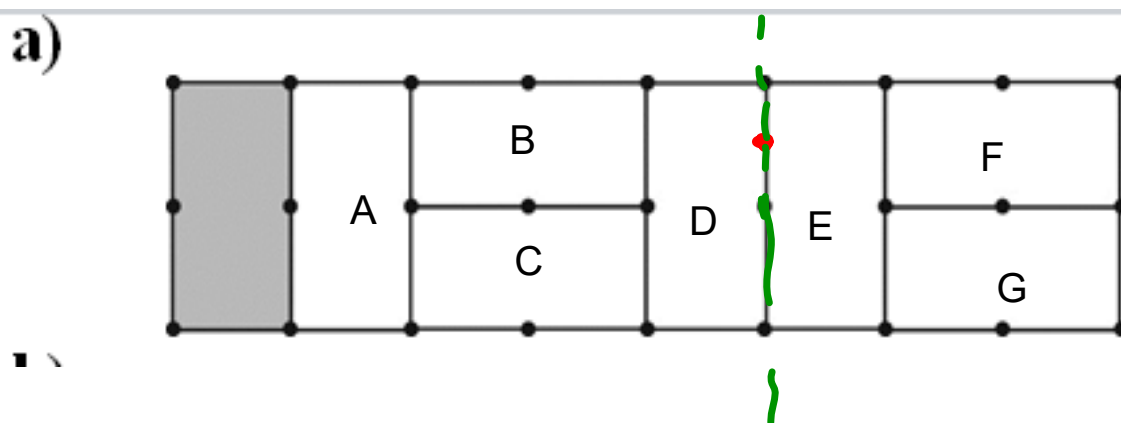
X



D.



6 How are the shapes related in the tessellation?



Solutions

- a) For example, label the rectangles to the right of the shaded rectangle from A to G.
 The shaded rectangle is translated 1 unit right to get Rectangle A. Rectangle A is rotated 90° counterclockwise about the upper right vertex of Rectangle A to get Rectangle B. Rectangle B is reflected in the side shared by rectangles B and C to get Rectangle C. Rectangle C is rotated 90° clockwise about the lower right vertex of Rectangle C to get Rectangle D. Rectangle D is translated 1 unit right to get Rectangle E. Use similar transformations to complete the pattern.

Class/Homework

Test ^{Wed}~~Tuesday~~, Dec. 1~~7~~

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