

MATH 106

QUIZ 3

Name _____

Answer all questions. Point values are indicated. Good luck.

1. (6 points) Provide the following information:

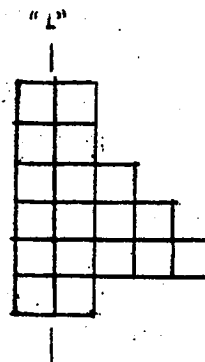
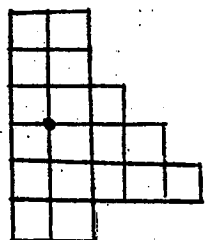
a. A regular octagon has _____ lines of reflection symmetry and _____ rotational symmetries.

b. The figure shown has _____ lines of reflection symmetry and _____ rotational symmetries.



c. An isosceles trapezoid (that is not a rectangle) has _____ lines of reflection symmetry and _____ rotational symmetries.

2. (4 points) Add six small squares to the following drawings so that the first drawing has 180° rotational symmetry with respect to the point indicated, and so that the line "L" represents a line of reflection symmetry for the second.



3. (1 point) How many planes of reflection symmetry does a right prism have if its bases are regular hexagons?

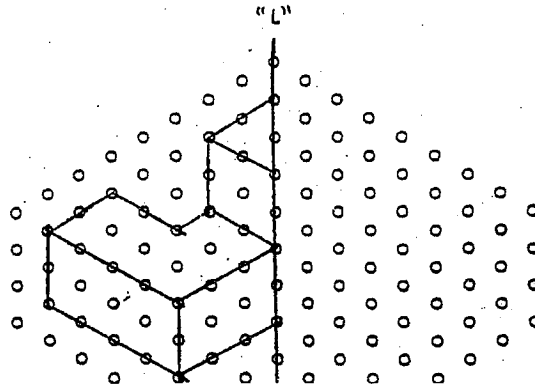
- a. five
- b. six
- c. seven
- d. ten
- e. twelve

4. (1 point) How many rotational symmetries does a right prism have if its bases are regular pentagons? (Include all axes of symmetry.)

- a. five
- b. six
- c. ten
- d. twelve
- e. fifteen

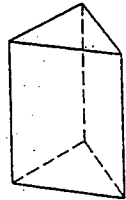
5. (3 points) A regular *decagonal* pyramid has _____ planes of reflection symmetry, _____ axes of rotational symmetry, and _____ rotational symmetries.

6. (2 points) If line "L" represents a plane of reflection symmetry, complete the isometric drawing of the shape so it has reflection symmetry.



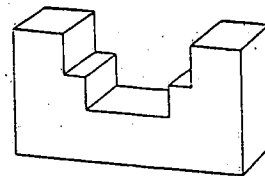
7. (2 points) Sketch an axis of symmetry of rotational symmetry for each figure and determine the number of rotational symmetries about the axis drawn.

a. Equilateral triangular prism



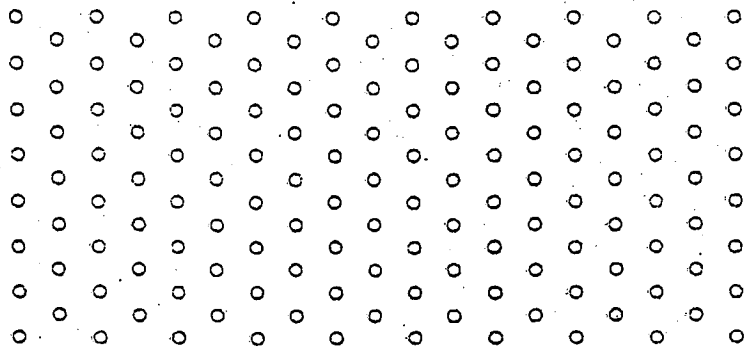
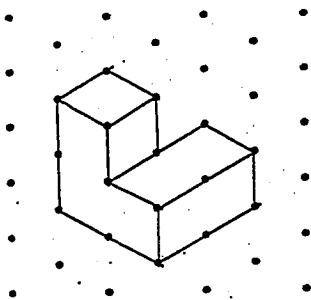
_____ rotational symmetries

b.

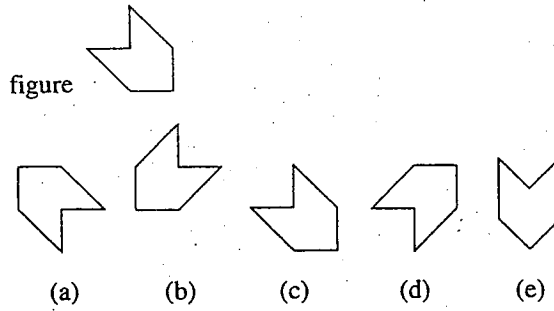


_____ rotational symmetries

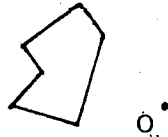
8. (2 points) On the dot paper below, draw the isometric representation congruent to the shape shown using a reflection.



9. (1 point) Which of the following would be the image of the figure transformed by a *translation*?



10. (2 points) Draw the image of the figure rotated 180° clockwise around point O.



11. (2 points) Draw the reflection of the figure across line R.

