Math 246 Geometry review Spring 2012

1. Draw in all of the symmetry lines, and find the angle of rotation symmetry for each of the following:

|  |  |  |
| --- | --- | --- |
| A.  | B.   | c. |

3. Complete the pattern so that it has reflection or rotational symmetry as specified:

|  |  |
| --- | --- |
| A. | B. |

|  |  |
| --- | --- |
| 4. Show with a dotted line, the image of triangle A after reflection in line l, and then show with a solid line, where the reflected triangle would be after being rotated by 90° counterclockwise around point P: | 5. Show with a dotted line, the image of flag F after translation by the vector BC, and then show with a solid line, where the translated flag would be after being rotated by 180° around point P: |
| 6. Tell how to get from trapezoid A to trapezoid B using 3 or fewer transformations: |  (A on the left) |

|  |  |
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| 7. Show and explain the steps for finding an interior angle of a regular pentagon. | 8. Find the missing angle measure in the polygon below: |

9. Know the definitions of:

isosceles triangle, equilateral triangle, scalene triangle, acute triangle, obtuse triangle, right triangle, square, rectangle, rhombus, kite, trapezoid (either definition will do), parallelogram, regular polygon, convex, concave. and be able to draw examples on a grid (except for equilateral triangles of course).

10. Which quadrilaterals have diagonals that bisect each other?

11. What are some common misconceptions students have about triangles?

12. The following can be accomplished by a single simple transformation (rotation, reflection or translation). Describe that transformation:

a. b. c. d.

   

13. What’s wrong with saying that the sum of the side lengths of this triangle is 6 (2+2+2)?



14. See the web site for practice with Venn diagrams.