4-3-Rotations – Homework Solutions

1)

2) a. E'(1, -2), F'(-4, 2), D'(3, 1)   b. T'(-3, 1), Q'(-3, 6), R'(0, 5), S'(0, 3)

3) a. X'(2, 0), Y'(5, -6)   b. X'(3, 1), Y'(-4, -5)

4) a. Yes, 90° rotations   b. Yes, 72° rotations   c. Yes, 180° rotations

5) X'(-8, 3), Y'(-4, 4), Z'(-5, 1)

6) Triangle: 120°   Quadrilateral: 90°, 180°   Pentagon: 72°, 144°   Hexagon: 60°, 120°

7) 90° rotation: $y = \dfrac{-1}{2}x + \dfrac{3}{2}$, perpendicular to preimage

   180° rotation: $y = 2x + 3$, parallel to preimage

   270° rotation: $y = \dfrac{-1}{2}x - \dfrac{3}{2}$, perpendicular to preimage

8)

9) 90° rotation: A'(2, 120°)   180° rotation: A''(2, 210°)   270° rotation: A'''(2, 300°)