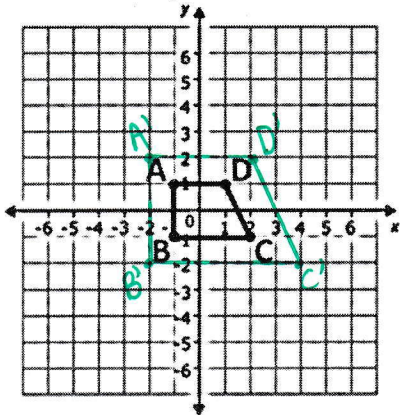## 1.9 Dilations with Different Centers

Geometry

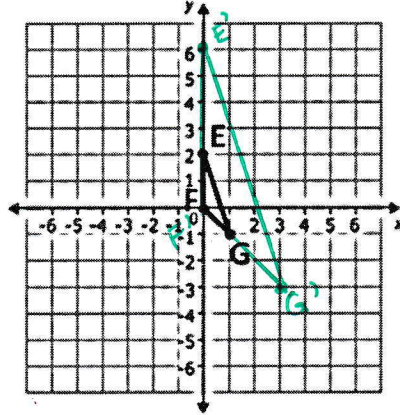**Directions: Perform the dilation given the scale factor and center of dilation.**

1) Scale Factor: 2
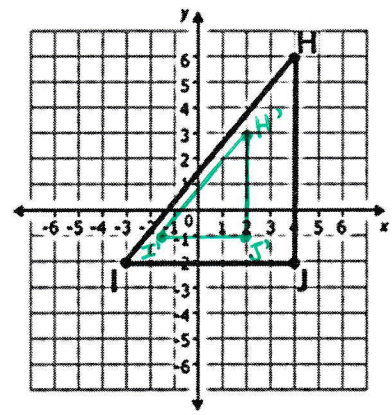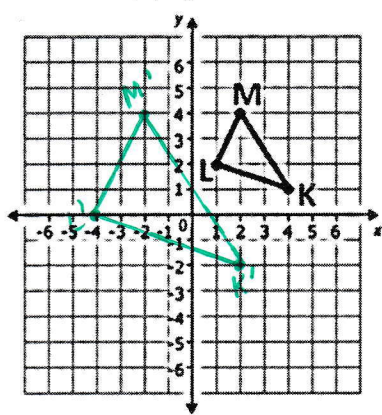
Center: Origin

2) Scale Factor: 3

Center: Origin

3) Scale Factor: $\frac{1}{2}$
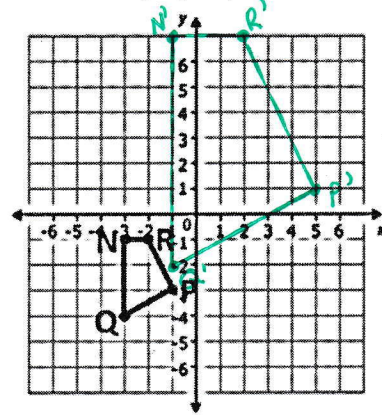
Center: Origin

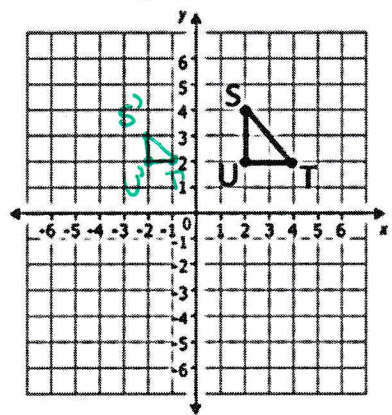4) Scale Factor: 2

Center: (6, 4)
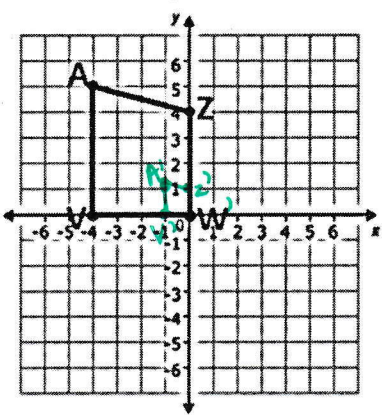

5) Scale Factor: 3

Center: (−4, −5)

6) Scale Factor: $\frac{1}{2}$
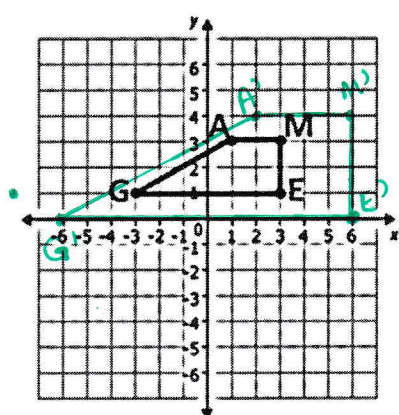
Center: (−6, 2)

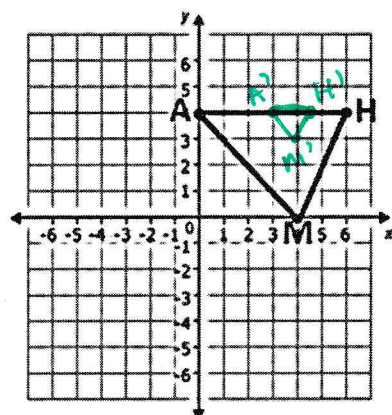7) Scale Factor: $\frac{1}{4}$

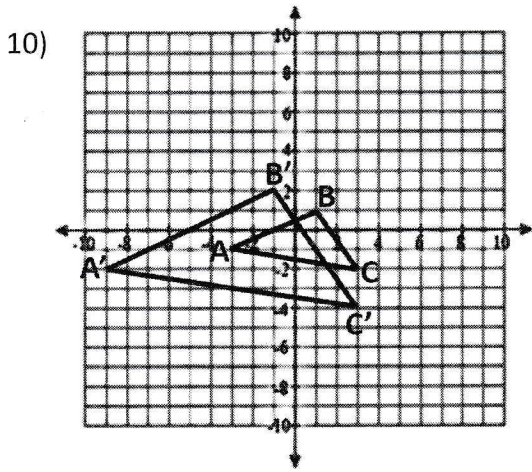Center: Origin

8) Scale Factor: 2

Center: (0, 2)

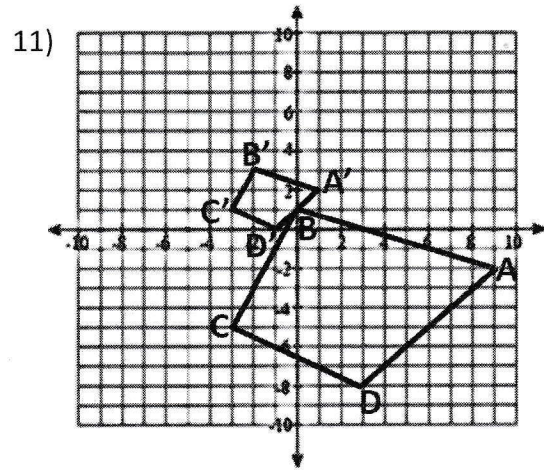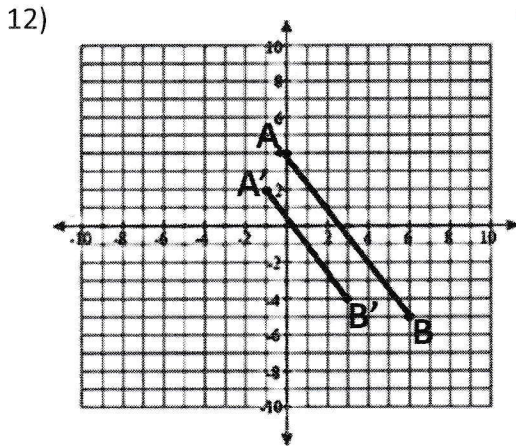9) Scale Factor: $\frac{1}{4}$

Center: (4, 4)

Directions: Identify the scale factor and the center of dilation.
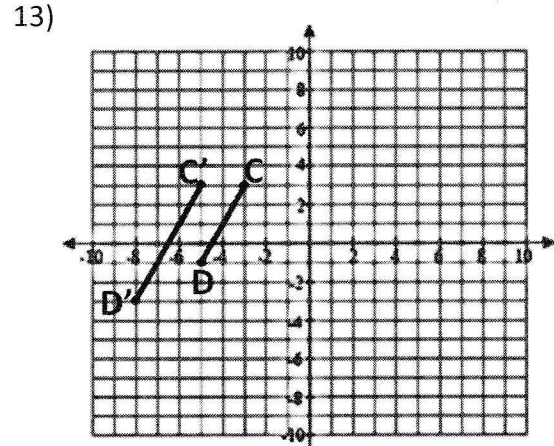
10)

Center of Dilation: (3,0)   Scale Factor: 2

11)

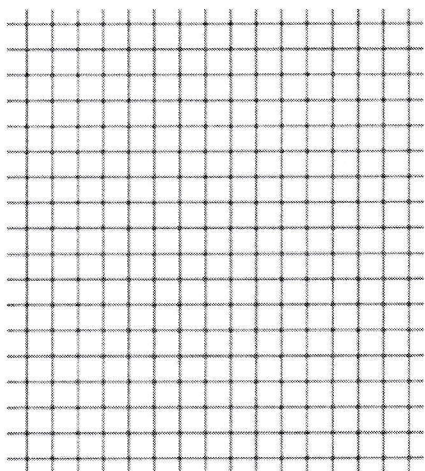Center of Dilation: (-3,4)   Scale Factor: $\frac{1}{3}$

12)

Center of Dilation: (-3,-2)   Scale Factor: $\frac{2}{3}$

13)

Center of Dilation: (1,3)   Scale Factor: $\frac{3}{2}$

Directions: Solve each problem.

14) M(−8, 4) is dilated about (−4,5) to produce M'(−12, 3). What is the ordered pair that will represent J' using this same dilation if Point J is located at (−4, 2)? dil by 2

J'(-4,-1)

15) Q(5, −1) is transformed by a horizontal stretch by a scale factor of 3 about a center of (1, 4). What is Q'?   Q'(13,-1)