

**Full credit is based on work shown!**

2pts

1. Evaluate  $\binom{8}{2} = {}_8C_2 =$

10pts

2. **Expand** this expression using the Binomial Theorem:

$$(4x - y)^5 =$$

For the following problems, **plot the point** and **label the axes** appropriately for each problem.

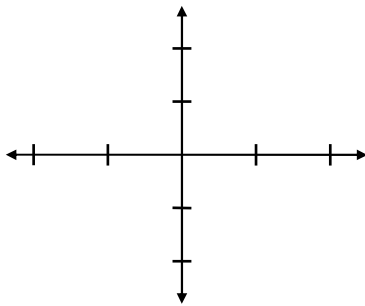
4pts

3. Convert from Polar Coordinates to Rectangular Coordinates:

**Plot the point**  $(r, \theta) = \left(4, \frac{\pi}{3}\right)$  (Notice  $\theta$  is in radians.)

Then **convert to rectangular coordinates**:

$(x, y) =$  \_\_\_\_\_



4pts

4. Convert from Rectangular Coordinates to Polar Coordinates.

**Plot the point**  $(x, y) = (-4, -4)$

Then **convert to polar coordinates**  $(r, \theta) =$

