Algebra 2 / Trig—H HW# 66 Name_____

Polar Practice P5-H

Give all answers in exact simplest form

1. In which quadrant is each point located? a) $(2, -100°)$ b) $(-1, -45°)$

2. Rename the point $(3, -150°)$ with a) both r and θ positive

   b) r negative and θ positive

3. Find polar coordinates for $\left(-2\sqrt{3}, -2\right)$.

4. Find rectangular coordinates for $(-2, 225°)$.

5. In which quadrant is each complex number located? a) $4 - 2i$ b) $3 + 4i$

6. Convert $-2 + 2\sqrt{3}i$ to polar form.

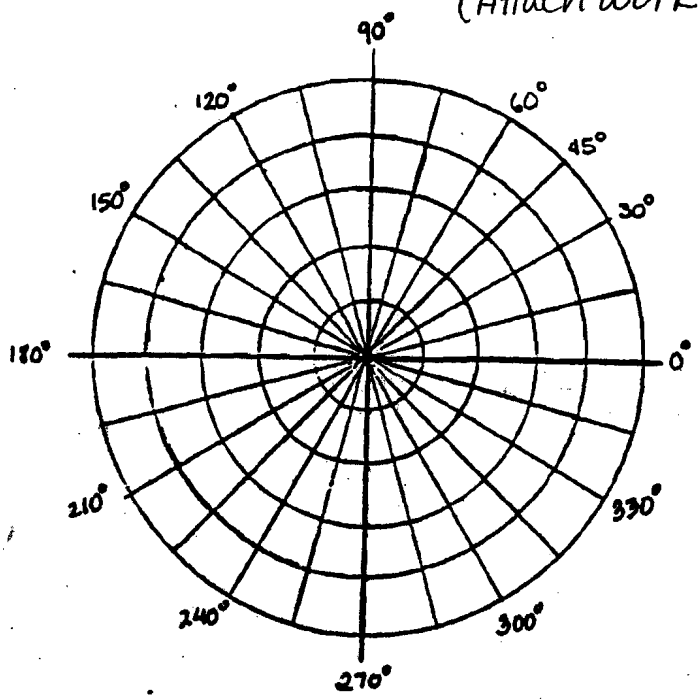
7. Convert 3 cis 330° to rectangular form.

8. Given: $w = 20\ cis\ 60°$ and $z = 5\ cis\ 90°$. Find a) wz and b) $\frac{w}{z}$ in rectangular form.

9. Find $\left(-1-\sqrt{3}i\right)^{10}$ in rectangular form.

10. Find a polar equation for $y = 3x + 2$. Solve the equation for r.

11. Graph: $r = 1 - 2\sin\theta$ (Attach work (list of pts).)



12. Graph. $r = 2\cos 2\theta$