

PreCalculus Honors
Worksheet 6.5B – KEY

1. $r = 3 \cos 5\theta$
2. $r = -5 \sin 3\theta$
3. $r = 3 \sin 2\theta$
4. 1st petal = $90/5 = 18^\circ$; spacing = $360/5 = 72^\circ$, so 3rd petal = $18^\circ + 72^\circ + 72^\circ = 162^\circ$
5. $r = 2 + \cos \theta$
6. $r = 1 - 2 \cos \theta$
7. $r = 3 + 3 \cos \theta$
8. $r = 3 + 2 \sin \theta$
9. $r = 2 + 3 \sin \theta$
10. $r = 2 - 2 \sin \theta$
11. $r = -6 \cos \theta$
12. $r = 10 \sin \theta$
13. $\theta = -45^\circ$ or $\theta = -\pi/4$
14. $r = \frac{-5}{\cos \theta}$ or $r = -5 \sec \theta$
15.
 - 5) Convex
 - 6) w/ inner loop
 - 7) Cardioid
 - 8) Dimpled
 - 9) w/ inner loop
 - 10) Cardioid