Lesson 9.2 Practice: Converting Between Polar and Rectangular Form

School Launch · Trigonometry · Unit 9: Polar Coordinates and Vectors · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Convert $(6, 315^\circ)$ to rectangular coordinates (exact).

EASY

2. Convert $(2, 300^\circ)$ to rectangular coordinates (exact).

EASY

3. Convert $(6, 120^\circ)$ to rectangular coordinates (exact).

EASY

4. Convert $(-7, -6)$ to polar form with $r > 0$ (angle to the nearest tenth of a degree, in $[0, 360)$). MEDIUM

5. Convert $(2, 60^\circ)$ to rectangular coordinates (exact).

MEDIUM

6. Convert $(9, 120^\circ)$ to rectangular coordinates (exact).

MEDIUM

7. Convert $(-9, 8)$ to polar form with $r > 0$ (angle to the nearest tenth of a degree, in $[0, 360)$). MEDIUM

8. Convert $(-1, 6)$ to polar form with $r > 0$ (angle to the nearest tenth of a degree, in $[0, 360)$). HARD

9. Convert $(3, 60^\circ)$ to rectangular coordinates (exact).

HARD

10. Convert $(6, 45^\circ)$ to rectangular coordinates (exact).

HARD