

Identify Conics from Polar Equations

Name in English

$$r = \frac{18}{2 - 6 \cos \theta}$$

1. Identify the equation in standard form.

a) $r = \frac{9}{1 - 3 \cos \theta}$

c) $r = \frac{9}{1 - 6 \cos \theta}$

b) $r = \frac{9}{2 - 3 \cos \theta}$

d) $r = \frac{18}{1 - 3 \cos \theta}$

2. Determine the eccentricity.

$$e =$$

3. Identify the type of conic.

a) Parabola

c) Ellipse

b) Circle

d) Hyperbola

4. Identify the equation of directrix.

a) $x = 3$

c) $y = 3$

b) $x = -3$

d) $y = -3$

$$r = \frac{-15}{6 \sin \theta - 3}$$

1. Identify the equation in standard form.

a) $r = \frac{-5}{2 \sin \theta - 1}$

c) $r = \frac{-5}{1 + 2 \sin \theta}$

b) $r = \frac{5}{1 - 2 \sin \theta}$

d) $r = \frac{-5}{1 + 2 \sin \theta}$

2. Determine the eccentricity.

$$e =$$

3. Identify the type of conic.

- a) Parabola
- b) Circle
- c) Ellipse
- d) Hyperbola

4. Identify the equation of directrix.

- a) $x = 2.5$
- b) $x = -2.5$
- c) $y = 2.5$
- d) $y = -2.5$

$$r = \frac{10}{3 + 2 \cos \theta}$$

1. Identify the equation in standard form.

- a) $r = \frac{10}{1 + \frac{2}{3} \cos \theta}$
- b) $r = \frac{\frac{10}{3}}{1 + \frac{2}{3} \cos \theta}$
- c) $r = \frac{10}{3 + \cos \theta}$
- d) $r = \frac{\frac{10}{3}}{3 + \cos \theta}$

2. Determine the eccentricity.

- a) $e = 10$
- b) $e = 3$
- c) $e = \frac{10}{2}$
- d) $e = \frac{2}{3}$

3. Identify the type of conic.

- a) Parabola
- b) Circle
- c) Ellipse
- d) Hyperbola

4. Identify the equation of directrix.

- a) $x = 5$
- b) $x = -5$
- c) $y = 5$
- d) $y = -5$