

Section 10.4: Identifying Conic Sections

Video 1: Identifying Conic Sections

Identify the conic section:

- Circle
- Parabola (up or down)
- Parabola (left or right)
- Ellipse (horizontal major axis)
- Ellipse (vertical major axis)
- Hyperbola (horizontal transverse axis – left/right)
- Hyperbola (vertical transverse axis – up/down)

1) $x^2 - 4x + y^2 + 6y = 12$

2) $\frac{x^2}{9} = 1 + \frac{y^2}{16}$

$$3) y + 3 = 8(x - 1)^2$$

$$4) \frac{(x-3)^2}{16} + \frac{(y+2)^2}{16} = 1$$

$$5) x^2 + 9y^2 + 144y = -135$$

$$6) 6x^2 - 12x + 6y^2 - 18y = -25$$

$$7) 12x + y^2 + 6y - 32 = 0$$

$$8) 25(x-5)^2 + 4(y-3)^2 = 100$$

$$9) 9x^2 - 36x - 4y^2 - 8y = -68$$