

SBM 2 Review

Date _____

Identify the vertices, foci, and asymptotes of each.

1)
$$\frac{(y-2)^2}{121} - \frac{(x+3)^2}{16} = 1$$

Identify the center, vertices, co-vertices, foci, length of the major axis, and length of the minor axis of each.

2)
$$\frac{(x-10)^2}{144} + \frac{(y+5)^2}{196} = 1$$

Identify the vertex, focus, axis of symmetry, and directrix of each.

3)
$$y = 7(x+9)^2 + 3$$

Identify the center and radius of each.

4)
$$(x-5)^2 + (y+11)^2 = 24$$

Identify the conic and write the standard form equation of each.

5)
$$x^2 + 4y^2 - 14x + 40y + 5 = 0$$

6)
$$x^2 + y^2 + 30x - 20y + 316 = 0$$

7) $x^2 - 4y^2 + 12x - 16y - 80 = 0$

8) $-3y^2 + x + 42y - 154 = 0$

Use the information provided to write the standard form equation of each circle.

9) Center: $(-1, -4)$
Radius: $\sqrt{95}$

Use the information provided to write the vertex form equation of each parabola.

10) Vertex: $(5, -6)$, Focus: $(5, -5)$

11) Focus: $(-\frac{49}{8}, 7)$, Directrix: $x = -\frac{47}{8}$

Use the information provided to write the standard form equation of each ellipse.

12) Vertices: $(9, 4), (-13, 4)$
Co-vertices: $(-2, 12), (-2, -4)$

13) Foci: $(-8, -4 + 5\sqrt{3}), (-8, -4 - 5\sqrt{3})$
Co-vertices: $(3, -4), (-19, -4)$

Use the information provided to write the standard form equation of each hyperbola.

14) Vertices: $(10, 11), (10, -7)$
Foci: $(10, 2 + \sqrt{202}), (10, 2 - \sqrt{202})$

15) Vertices: $(2, 9), (-8, 9)$
Perimeter of Central Rectangle = 44

Identify the vertices, foci, and asymptotes of each.

16) $\frac{(x+7)^2}{196} - \frac{(y-9)^2}{49} = 1$