

## Mixed Review Ch 8 and 10 w/s 2

Date \_\_\_\_\_ Period \_\_\_\_\_

**Write each expression in radical form.**

1)  $(3b)^{\frac{4}{5}}$

2)  $x^{\frac{5}{2}}$

**Write each expression in exponential form.**

3)  $(\sqrt{n})^5$

4)  $(\sqrt[3]{4x})^2$

**Simplify.**

5)  $(625v^{12})^{\frac{3}{4}}$

6)  $(100000p^{10})^{\frac{3}{5}}$

7)  $\sqrt{24x^4y^4}$

8)  $\sqrt[3]{54x^2y^4}$

**Solve each equation.**

9)  $2052 = 4 + 4m^{\frac{3}{2}}$

10)  $-6 + (r + 2)^{\frac{5}{6}} = 26$

**Solve each equation. Remember to check for extraneous solutions.**

11)  $8 = -2 + \sqrt{2k + 96}$

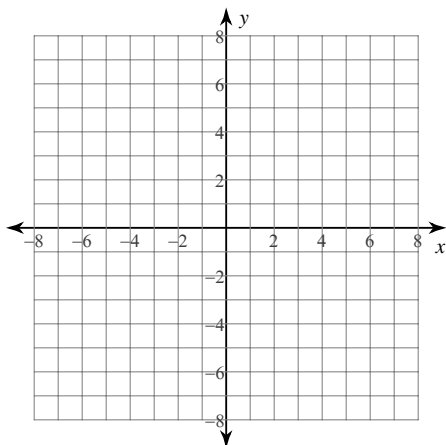
12)  $\sqrt{m + 7} = \sqrt{-1 - 3m}$

13)  $\sqrt{4v + 45} = v + 6$

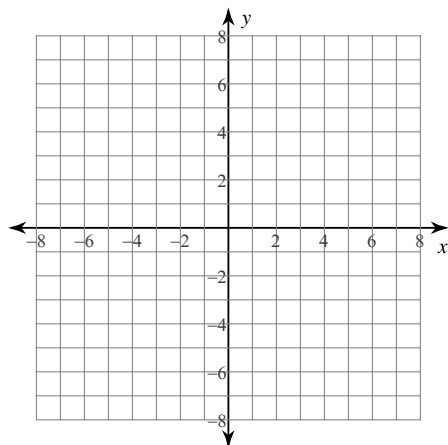
14)  $x = 10 + \sqrt{60 - 6x}$

Identify the center and radius of each. Then sketch the graph.

15)  $(x + 1)^2 + (y + 3)^2 = 4$

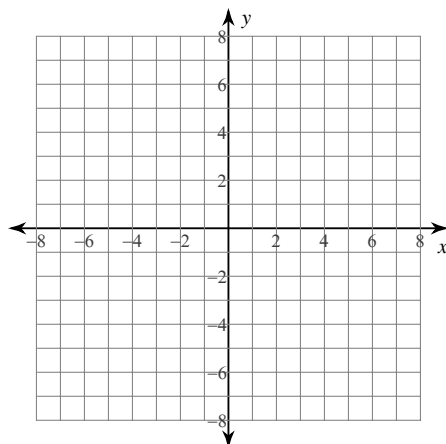


16)  $(x - 2)^2 + (y - 3)^2 = 16$

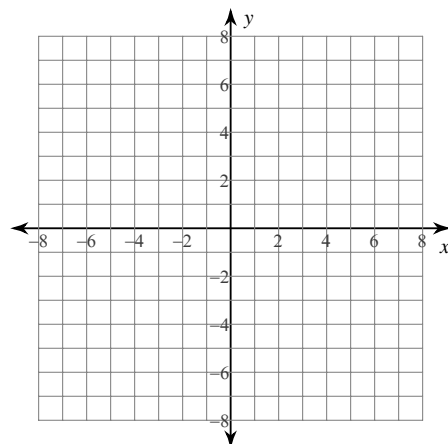


Graph each equation.

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

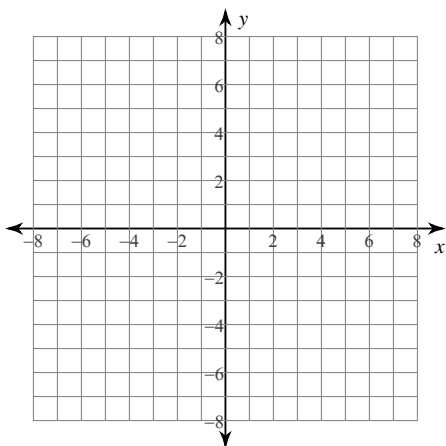


18)  $\frac{(x + 2)^2}{25} + \frac{y^2}{5} = 1$

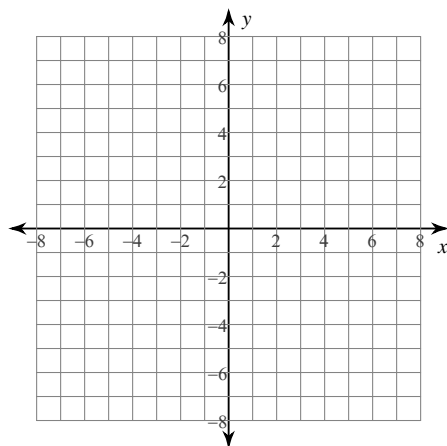


Identify the vertices of each. Then sketch the graph.

$$19) \frac{(x-1)^2}{4} - \frac{y^2}{25} = 1$$

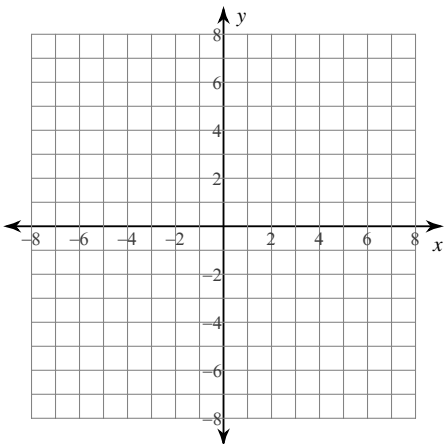


$$20) \frac{(y-2)^2}{4} - \frac{x^2}{25} = 1$$

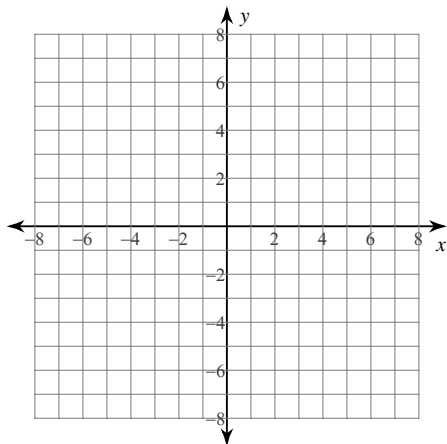


Identify the vertex of each. Then sketch the graph.

$$21) -(y+1) = (x+2)^2$$



$$22) y-1 = (x-5)^2$$



**Classify each conic section and write its equation in standard form.**

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

24)  $x^2 + y^2 + 4x + 6y + 7 = 0$

25)  $9x^2 + 25y^2 - 100y - 125 = 0$

26)  $4x^2 + y^2 + 40x - 2y + 85 = 0$

27)  $-9x^2 + 16y^2 + 18x - 153 = 0$

28)  $-x^2 + y^2 - 4x + 2y - 7 = 0$

29)  $-x^2 + 4x + 3y + 5 = 0$

30)  $2x^2 + 24x + y + 77 = 0$

# Answers to Mixed Review Ch 8 and 10 w/s 2 (ID: 1)

1)  $(\sqrt[5]{3b})^4$

2)  $(\sqrt{x})^5$

3)  $n^{\frac{5}{2}}$

4)  $(4x)^{\frac{2}{3}}$

5)  $125v^9$

6)  $1000p^6$

7)  $2x^2y^2\sqrt{6}$

8)  $3y^3\sqrt{2x^2y}$

9)  $\{64\}$

10)  $\{62\}$

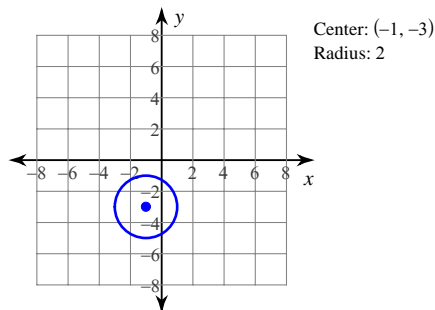
11)  $\{2\}$

12)  $\{-2\}$

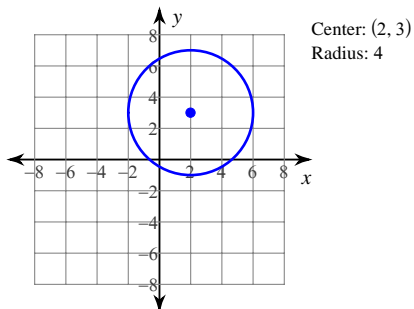
13)  $\{1\}$

14)  $\{10\}$

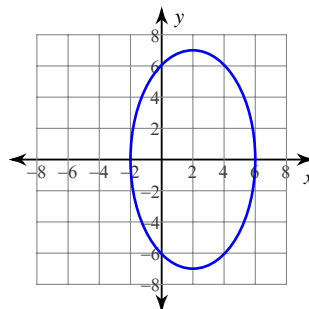
15)



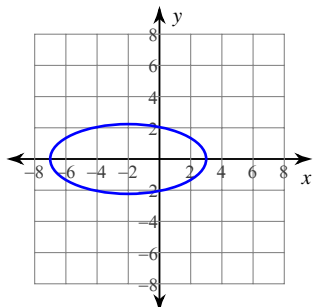
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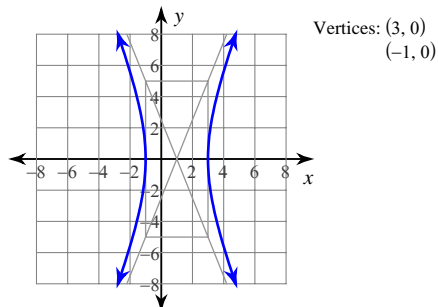
17)



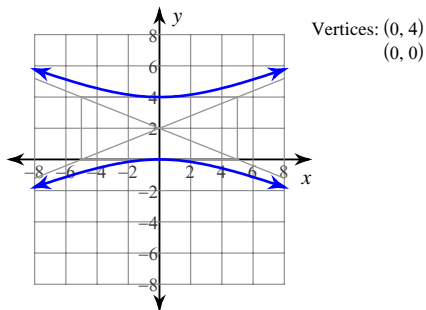
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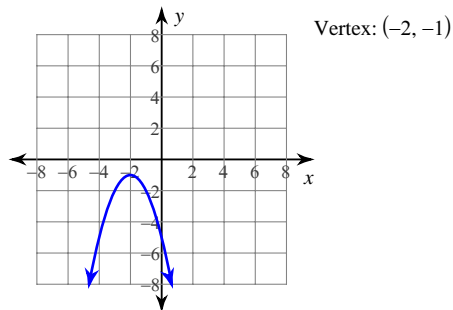
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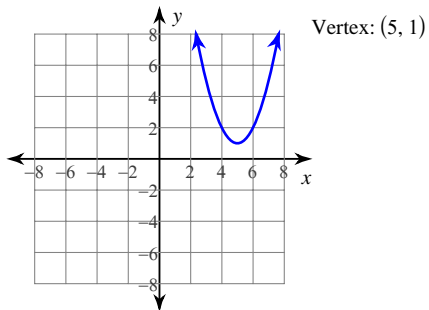
20)



21)



22)



23) Circle

$$(x + 3)^2 + y^2 = 16$$

24) Circle

$$(x + 2)^2 + (y + 3)^2 = 6$$

25) Ellipse

$$\frac{x^2}{25} + \frac{(y - 2)^2}{9} = 1$$

26) Ellipse

$$\frac{(x + 5)^2}{4} + \frac{(y - 1)^2}{16} = 1$$

27) Hyperbola

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

28) Hyperbola

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

29) Parabola

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

30) Parabola

$$y = -2(x + 6)^2 - 5$$