Conic Sections: Circles, Ellipses & Hyperbolas · 1

Complete the square to find the radius of the circle $x^2 - 6x + y^2 - 8y - 11 = 0$.

Conic Sections: Circles, Ellipses & Hyperbolas · 2

Find the focus with the larger y-coordinate of the ellipse $(x - 4)^2 / 25 + y^2 / 169 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 3

Find c, the distance from the center to each focus of the hyperbola $(y + 5)^2 / 36 - (x + 4)^2 / 64 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 4

Find c, the distance from the center to each focus of the ellipse $(x - 4)^2 / 289 + (y + 1)^2 / 225 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 5

Find c, the distance from the center to each focus of the hyperbola $(x - 1)^2 / 36 - (y + 3)^2 / 64 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 6

Find c, the distance from the center to each focus of the hyperbola $(x + 3)^2 / 64 - (y + 5)^2 / 36 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 7

Find the vertex with the larger y-coordinate of the hyperbola $(y + 1)^2 / 16 - (x + 3)^2 / 9 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 8

Find the focus with the larger y-coordinate of the ellipse $(x + 6)^2 / 225 + (y - 3)^2 / 289 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 2

ANSWER

(4, 12)

Conic Sections: Circles, Ellipses & Hyperbolas · 1

ANSWER

6

Conic Sections: Circles, Ellipses & Hyperbolas · 4

ANSWER

8

Conic Sections: Circles, Ellipses & Hyperbolas · 3

ANSWER

10

Conic Sections: Circles, Ellipses & Hyperbolas · 6

ANSWER

10

Conic Sections: Circles, Ellipses & Hyperbolas · 5

ANSWER

10

Conic Sections: Circles, Ellipses & Hyperbolas · 8

ANSWER

(-6, 11)

Conic Sections: Circles, Ellipses & Hyperbolas · 7

ANSWER

(-3, 3)

Complete the square to find the center of the circle $x^2 - 12x + y^2 + 8y + 51 = 0$.

Find c, the distance from the center to each focus of the ellipse $(x + 1)^2 / 64 + (y + 4)^2 / 100 = 1$.

Find the focus with the larger x-coordinate of the hyperbola $(x + 4)^2 / 36 - (y - 2)^2 / 64 = 1$.

Find the focus with the larger x-coordinate of the ellipse $(x - 5)^2 / 169 + (y + 2)^2 / 25 = 1$.

Find the positive slope of the asymptotes of the hyperbola $(x + 3)^2 / 144 - (y - 3)^2 / 25 = 1$.

Find the center of the hyperbola $(y + 1)^2 / 25 - (x - 1)^2 / 144 = 1$.

Find the focus with the larger y-coordinate of the ellipse $(x + 6)^2 / 144 + (y - 3)^2 / 169 = 1$.

Find the center of the hyperbola $(y + 5)^2 / 144 - (x - 2)^2 / 25 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 10

ANSWER

6

Conic Sections: Circles, Ellipses & Hyperbolas · 9

ANSWER

(6, -4)

Conic Sections: Circles, Ellipses & Hyperbolas · 12

ANSWER

(17, -2)

Conic Sections: Circles, Ellipses & Hyperbolas · 11

ANSWER

(6, 2)

Conic Sections: Circles, Ellipses & Hyperbolas · 14

ANSWER

(1, -1)

Conic Sections: Circles, Ellipses & Hyperbolas · 13

ANSWER

$$\frac{5}{12}$$

Conic Sections: Circles, Ellipses & Hyperbolas · 16

ANSWER

(2, -5)

Conic Sections: Circles, Ellipses & Hyperbolas · 15

ANSWER

(-6, 8)

Complete the square to find the center of the circle $x^2 + 14x + y^2 - 2y - 50 = 0$.

Find the center of the ellipse $(x - 1)^2 / 9 + (y + 1)^2 / 25 = 1$.

Find c, the distance from the center to each focus of the hyperbola $(y - 2)^2 / 25 - (x - 3)^2 / 144 = 1$.

Find c, the distance from the center to each focus of the ellipse $(x + 3)^2 / 64 + (y - 1)^2 / 100 = 1$.

Find c, the distance from the center to each focus of the hyperbola $(x + 2)^2 / 16 - (y - 1)^2 / 9 = 1$.

Find the center of the hyperbola $(x - 4)^2 / 64 - (y + 1)^2 / 36 = 1$.

Find the positive slope of the asymptotes of the hyperbola $(y + 5)^2 / 16 - (x - 5)^2 / 9 = 1$.

Find the center of the hyperbola $(x + 6)^2 / 9 - (y - 5)^2 / 16 = 1$.

Conic Sections: Circles, Ellipses & Hyperbolas · 18

ANSWER

$(1, -1)$

Conic Sections: Circles, Ellipses & Hyperbolas · 17

ANSWER

$(-7, 1)$

Conic Sections: Circles, Ellipses & Hyperbolas · 20

ANSWER

6

Conic Sections: Circles, Ellipses & Hyperbolas · 19

ANSWER

13

Conic Sections: Circles, Ellipses & Hyperbolas · 22

ANSWER

$(4, -1)$

Conic Sections: Circles, Ellipses & Hyperbolas · 21

ANSWER

5

Conic Sections: Circles, Ellipses & Hyperbolas · 24

ANSWER

$(-6, 5)$

Conic Sections: Circles, Ellipses & Hyperbolas · 23

ANSWER

$$\frac{4}{3}$$