

SM2H 5.4 answers

1. Center: (0, 0)

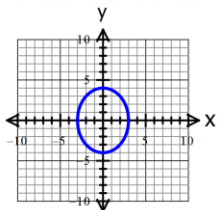
$a=4$

$b=3$

$c=\sqrt{7}$

Vertices: (0,4) & (0,-4)

Foci: $(0, \sqrt{7})$ & $(0, -\sqrt{7})$



2. Center: (0, 0)

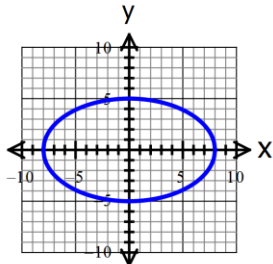
$a=8$

$b=5$

$c=\sqrt{39}$

Vertices: (-8,0) & (8,0)

Foci: $(-\sqrt{39}, 0)$ & $(\sqrt{39}, 0)$



3. Center: (0, 0)

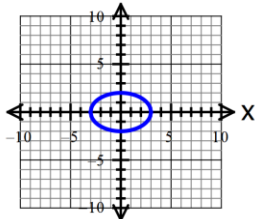
$a=3$

$b=2$

$c=\sqrt{5}$

Vertices: (-3,0) & (3,0)

Foci: $(-\sqrt{5}, 0)$ & $(\sqrt{5}, 0)$



4. Center: (0, 0)

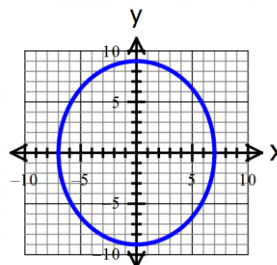
$a=9$

$b=7$

$c=4\sqrt{2}$

Vertices: (0,9) & (0,-9)

Foci: $(0, 4\sqrt{2})$ & $(0, -4\sqrt{2})$



5. $\frac{x^2}{100} + \frac{y^2}{64} = 1$

6. $\frac{x^2}{7} + \frac{y^2}{16} = 1$

7. $\frac{x^2}{16} + \frac{y^2}{36} = 1$

8. $\frac{x^2}{9} + \frac{y^2}{4} = 1$

9. Center: (3, -2)

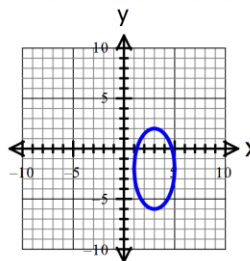
$a=4$

$b=2$

$c=2\sqrt{3}$

Vertices: (3,2) & (3,-6)

Foci: $(3, -2 + 2\sqrt{3})$ & $(3, -2 - 2\sqrt{3})$



10. Center: (-3, -1)

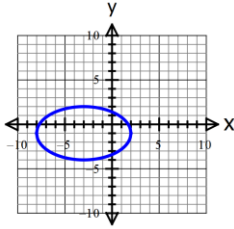
$a=5$

$b=3$

$c=4$

Vertices: (2, -1) & (-8, -1)

Foci: (1, -1) & (-7, -1)



- 21. H
- 22. E
- 23. P

11. Center: (3,-2)

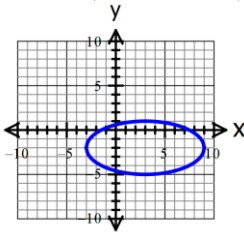
$$a=6$$

$$b=3$$

$$c=3\sqrt{3}$$

Vertices: (9,-2) & (-3,-2)

Foci: $(3+3\sqrt{3}, -2)$ & $(3-3\sqrt{3}, -2)$



12. Center: (-1,-2)

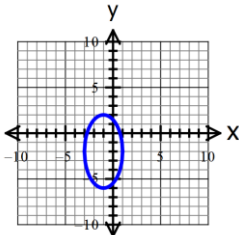
$$a=4$$

$$b=2$$

$$c=2\sqrt{3}$$

Vertices: (-1,2) & (-1,-6)

Foci: $(-1, -2+2\sqrt{3})$ & $(-1, -2-2\sqrt{3})$



$$13. \frac{(x-3)^2}{9} + \frac{(y+2)^2}{25} = 1$$

$$14. \frac{(x+1)^2}{25} + \frac{(y-2)^2}{9} = 1$$

$$15. \frac{(x-5)^2}{9} + \frac{(y-2)^2}{8} = 1$$

16. H

17. E

18. P

19. C or E

20. H