

Graph each ellipse. Find the center, vertices, covertices, foci, and lengths of the major and minor axes for each ellipse whose equation is given.

1. $\frac{x^2}{4} + \frac{y^2}{16} = 1$

C _____

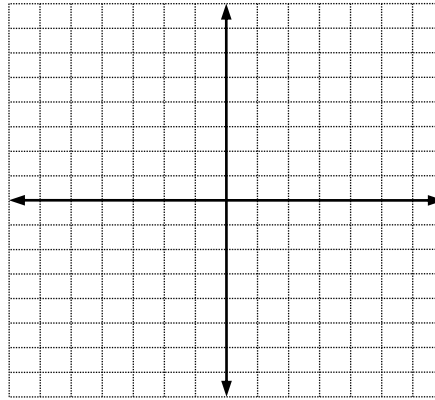
V _____

CV _____

F _____

major length = _____

minor length = _____



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

C _____

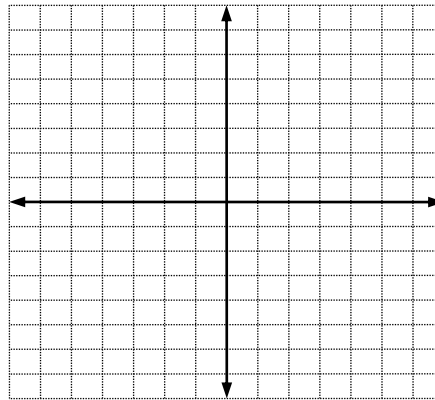
V _____

CV _____

F _____

major length = _____

minor length = _____



3. $4x^2 + 81y^2 = 324$

(hint: Divide the equation by 324.)

C _____

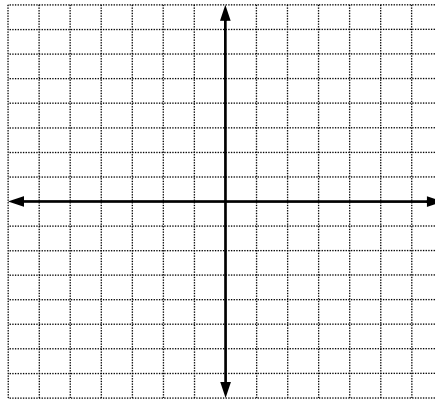
V _____

CV _____

F _____

major length = _____

minor length = _____



$$4. \frac{(x-2)^2}{4} + \frac{(y+3)^2}{9} = 1$$

C _____

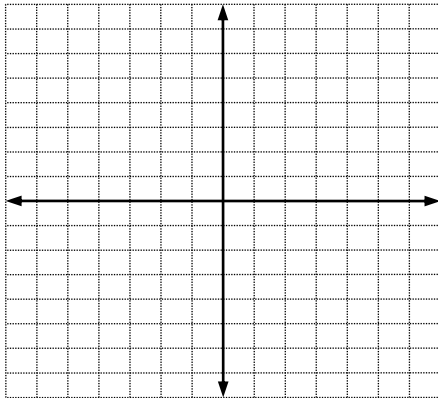
V _____

CV _____

F _____

major length = _____

minor length = _____



$$6. \frac{(x+2)^2}{4} + \frac{(y-4)^2}{1} = 1$$

C _____

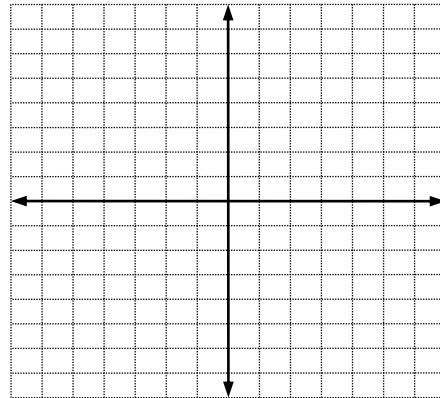
V _____

CV _____

F _____

major length = _____

minor length = _____



$$5. \frac{(x+4)^2}{25} + \frac{y^2}{16} = 1$$

C _____

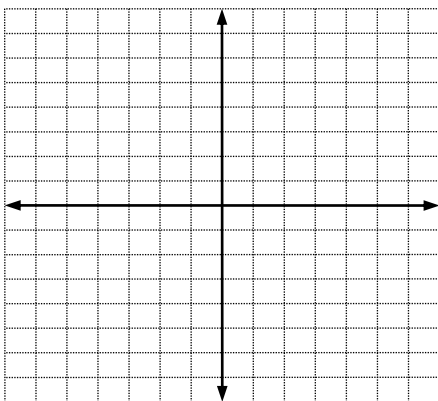
V _____

CV _____

F _____

major length = _____

minor length = _____



$$7. \frac{(x-3)^2}{25} + \frac{(y+3)^2}{36} = 1$$

C _____

V _____

CV _____

F _____

major length = _____

minor length = _____

