PRE-CALCULUS · HOMEWORK

Find Eccentricity

SCORE / 25

01 Part A · Practice

Eccentricity $e = \frac{c}{a}$ measures how stretched an ellipse is: $0 \le e < 1$; near 0 it is almost a circle, near 1 it is long and thin.

1 ●○○ An ellipse has vertices $(0, \pm 3)$ and foci $(0, \pm 2\sqrt{2})$. Find its eccentricity.

2 ●○○ Find the eccentricity of $\frac{(x+6)^2}{49} + \frac{(y-5)^2}{625} = 1$.

3 ●○○ Write the ellipse centered at the origin with vertices $(0, \pm 13)$ and eccentricity $\frac{12}{13}$.

4 ●○○ An ellipse centered at the origin has a horizontal major axis of length 80 and $e = \frac{4}{5}$. Find its foci and b.

5 ●○○ Write the ellipse centered at the origin with vertices $(\pm 20, 0)$ and eccentricity $\frac{3}{5}$.

6 ●○○ Find the eccentricity of $\frac{(x-1)^2}{49} + \frac{(y+2)^2}{625} = 1$.

7 ●○○ An ellipse has vertices $(0, \pm 17)$ and foci $(0, \pm 15)$. Find its eccentricity.

8 ●○○ An ellipse centered at the origin has a horizontal major axis of length 60 and $e = \frac{3}{5}$. Find its foci and b.

9 ●○○ An ellipse centered at the origin has a horizontal major axis of length 30 and $e = \frac{4}{5}$. Find its foci and b.

10 ●○○ Find the eccentricity of $\frac{x^2}{81} + \frac{(y+1)^2}{225} = 1$.

© 2026 Math Teacher Prints · 9-2d Homework · Regular

Preview - the full worksheet and its answer key are at primeworksheet.com