Pi Day Pie with Two… Foci
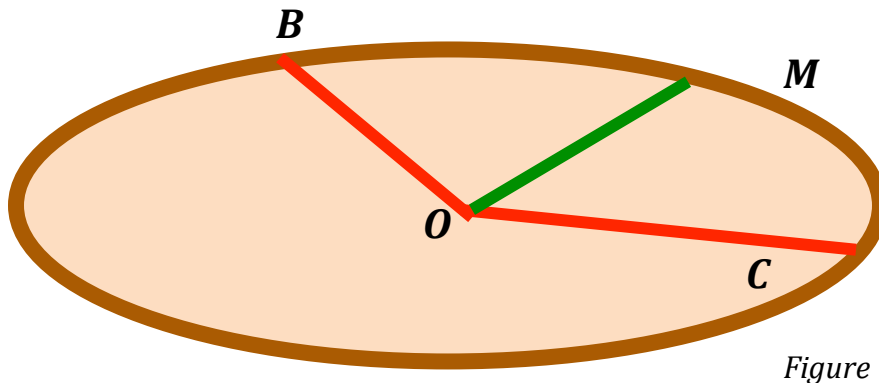
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Since the time of Pythagoreans, classic πr^2 and πab worked everywhere, in astronomy, machinery, architecture, art, and even in… baking. One delicious cookbook of the ancients describes an **elliptic** pie centered at O (see Figure) whose yummy slices *BMO* and *CMO* are **equal in area**. Let major and minor axes of ellipse be 34 and 24 cm . If B is 10 cm above the major axis, and C is 4 cm below it, how far from the major axis is M? Give an exact answer.

Figure