

π IN THE SKY⁷

Answer Key

Mars Maneuver

What percentage of Curiosity's landing ellipse is Perseverance's landing ellipse?

1. Divide the area of Perseverance's landing ellipse by the area of Curiosity's landing ellipse, using the formula for the area of an ellipse. (Note: π cancels out π .)

$$A_{\text{ellipse}} = \pi ab$$

$$(\pi \cdot 3.5 \cdot 6.5) / (\pi \cdot 3.5 \cdot 10) \Rightarrow (3.5 \cdot 6.5) / (3.5 \cdot 10) = 0.65$$

2. Convert to a percentage.

$$0.65 \cdot 100 = 65\%$$

