



$$\text{sen } \beta = \sqrt{1 - \cos^2 \beta}$$

$$\text{sen}^2 \beta = \frac{9}{16} \cos^2 \beta$$

$$1 - \cos^2 \beta = \frac{9}{16} \cos^2 \beta$$

$$\cos \beta = \frac{4}{5} \quad \text{sen } \beta = \frac{3}{5}$$

$$\overline{AB} = a \cos \beta = \frac{4}{5} a$$

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$$\overline{FB} = a \cos(\beta - x)$$

$$\overline{FB} = a(\cos \beta \cos x + \text{sen } \beta \text{sen } x)$$

$$\overline{FB} = a \left(\frac{4}{5} \cos x + \frac{3}{5} \text{sen } x \right)$$

$$\overline{EB} = \overline{AB} \cos x$$

$$\overline{EB} = \frac{4}{5} a \cos x$$

$$\overline{EF} = \overline{FB} - \overline{EB}$$

$$\overline{EF} = \frac{4}{5} a \cos x + \frac{3}{5} a \text{sen } x - \frac{4}{5} a \cos x \quad \overline{EF} = \frac{3}{5} a \text{sen } x$$

$$f(x) = \frac{\overline{EF}}{\overline{AB}}$$

$$f(x) = \frac{3}{5} \text{sen } x \left(\frac{5}{4a} \right)$$

$$0 \leq x \leq \beta$$

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$$f(x) = \frac{3}{5} \text{sen } x$$

$$0 \leq x \leq \beta$$

