

**Answer on Question #60260-Physics-Optics**

If  $\sin i$  is  $\frac{3}{5}$  what is  $\tan i$

**Solution**

$$\tan i = \frac{\sin i}{\cos i} = \frac{\sin i}{\sqrt{1 - (\sin i)^2}} = \frac{\frac{3}{5}}{\sqrt{1 - \left(\frac{3}{5}\right)^2}} = \frac{\frac{3}{5}}{\sqrt{\frac{16}{25}}} = \frac{\frac{3}{5}}{\frac{4}{5}} = \frac{3}{4}$$

**Answer:**  $\frac{3}{4}$ .

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