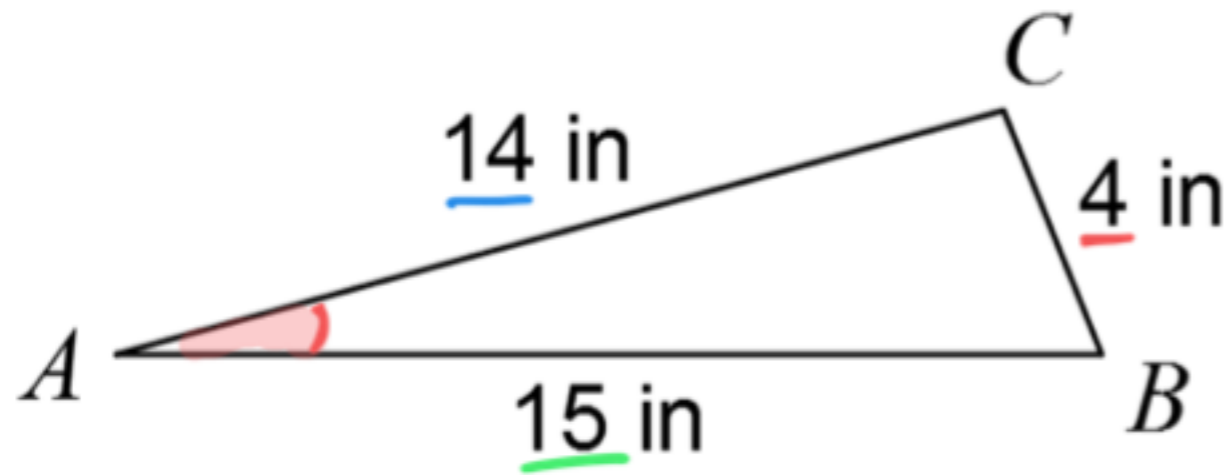


Find the area of the triangle



$$\text{Area} = \frac{1}{2} b c \sin A$$

$$\text{Area} = \frac{1}{2} \cdot 14 \cdot 15 \sin(15.4^\circ)$$

$$\text{Area} = 27.88 \text{ in}^2$$

$$4^2 = 14^2 + 15^2 - 2 \cdot 14 \cdot 15 \cdot \cos A$$

$$16 = 196 + 225 - 420 \cos A$$

$$16 = 421 - 420 \cos A$$

$$-421 - 421$$

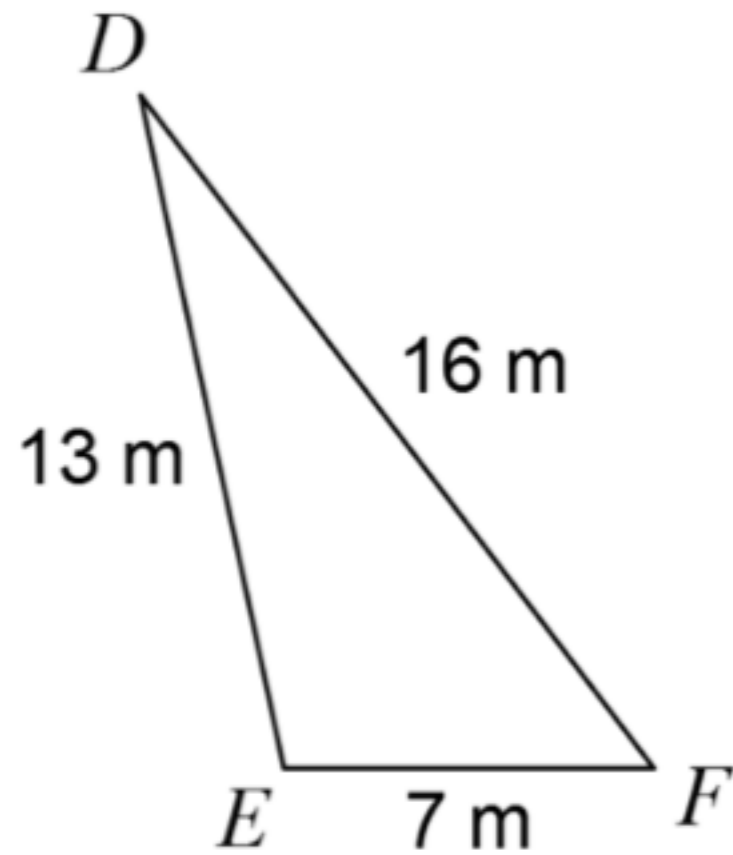
$$\frac{-405}{-420} = \frac{-420 \cos A}{-420}$$

$$.964 = \cos A$$

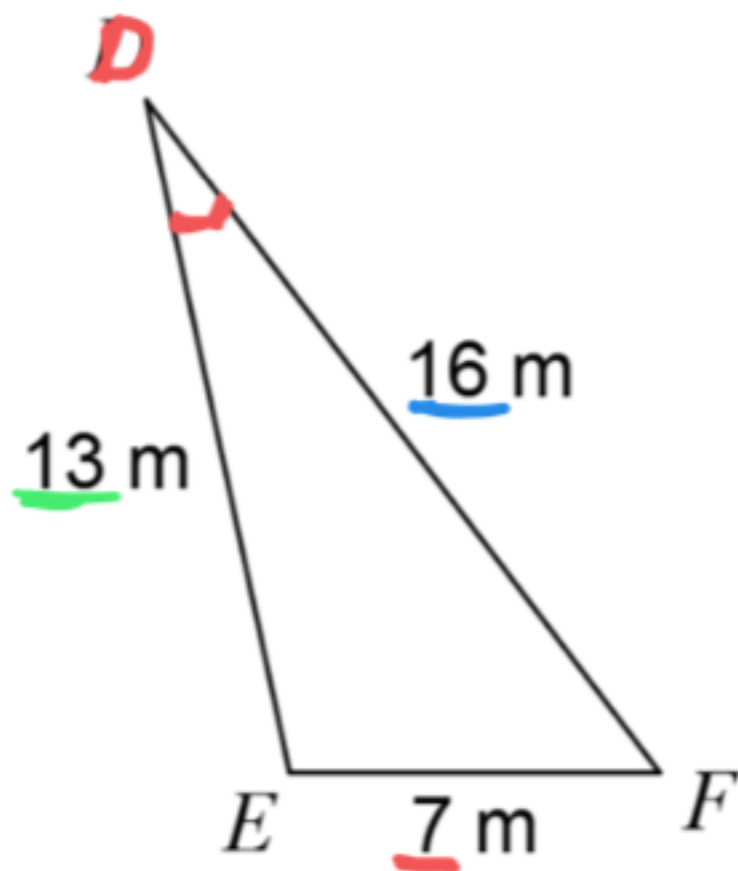
$$A = \cos^{-1}(.964)$$

$$A = 15.4^\circ$$

Find the area of the triangle



Find the area of the triangle



$$7^2 = 16^2 + 13^2 - 2(16)(13)\cos D$$

$$49 = 256 + 169 - 416\cos D$$

$$49 = 425 - 416\cos D$$

$$-425 \quad -425$$

$$-376 = -416\cos D$$

$$\frac{-376}{-416} = \frac{-416\cos D}{-416}$$

$$\cos D = .904$$

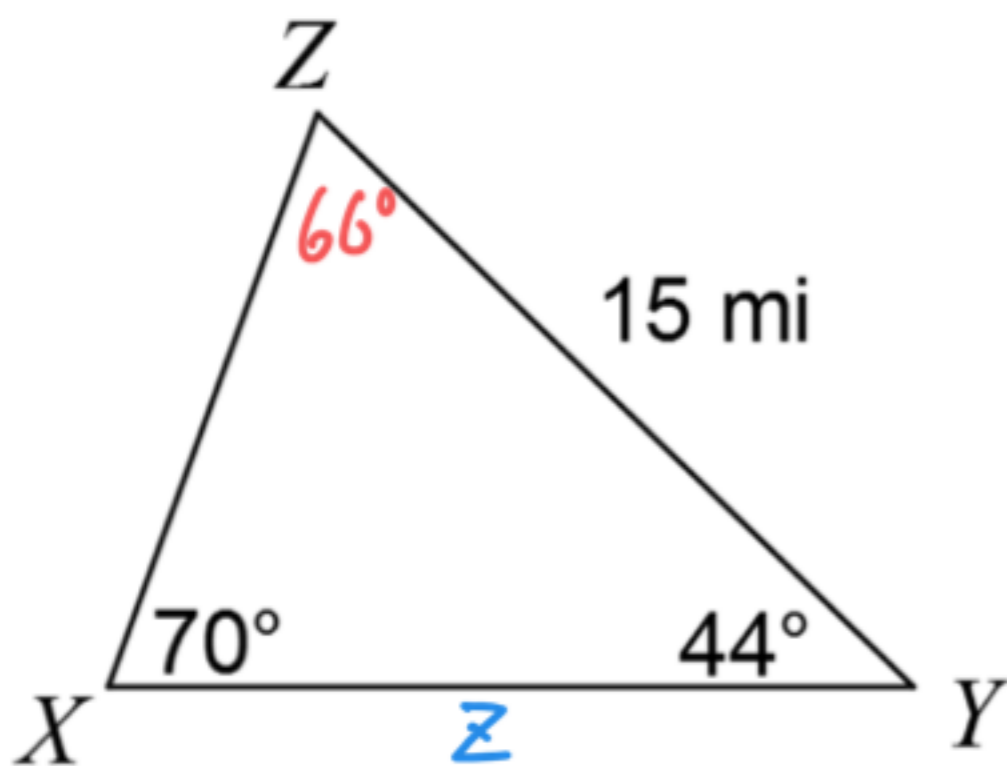
$$D = \cos^{-1}(.904)$$

$$D = 25.3^\circ$$

$$\text{Area} = \frac{1}{2}(16)(13)\sin(25.3)$$

$$\text{Area} = 44.4 \text{ m}^2$$

Find the area of the triangle



$$Z = 180 - 70 - 44 = 66^\circ$$

$$\text{Area} = \frac{1}{2} z \cdot x \sin Y$$

$$\text{Area} = \frac{1}{2} (14.58)(15) \sin 44^\circ$$

$$\text{Area} = 75.96 \text{ mi}^2$$

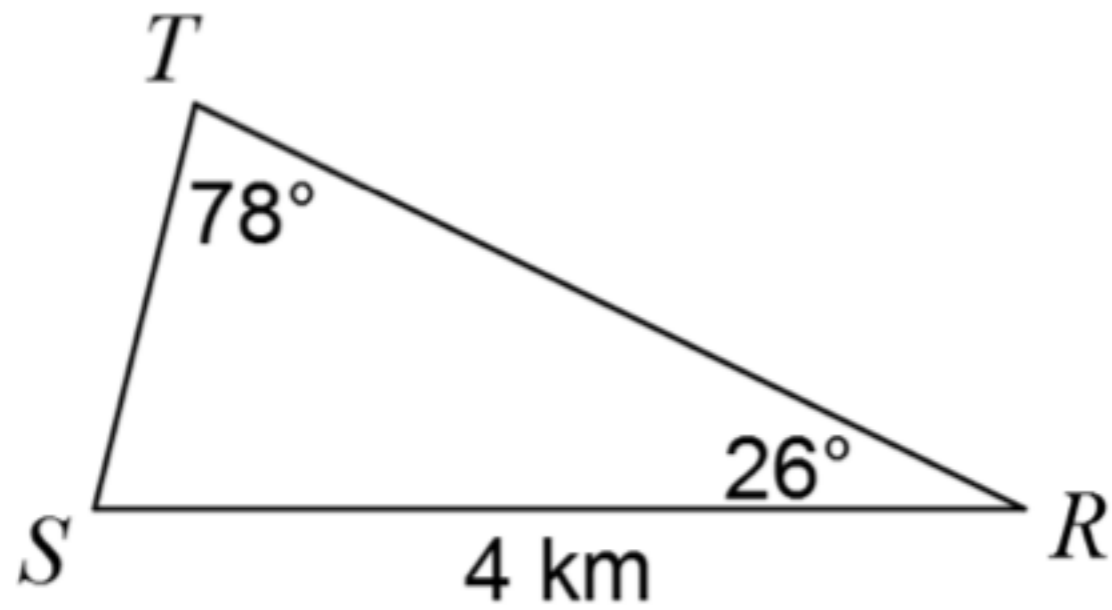
$$\frac{\sin 70^\circ}{15} = \frac{\sin 66^\circ}{z}$$

$$\frac{z \cdot \cancel{\sin 70^\circ}}{\cancel{\sin 70^\circ}} = \frac{15 \cdot \sin 66^\circ}{\sin 70^\circ}$$

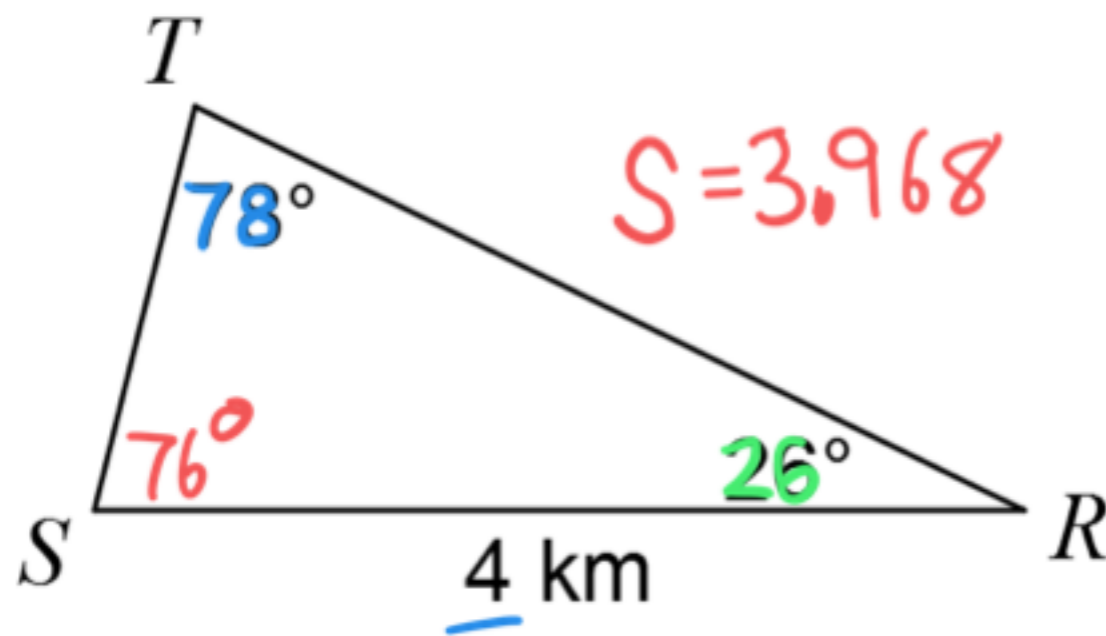
$$z = \frac{15 \cdot \sin 66^\circ}{\sin 70^\circ}$$

$$z = 14.58 \text{ mi}$$

Find the area of the triangle



Find the area of the triangle



$$\frac{\sin 78}{4} = \frac{\sin 76}{S}$$

$$\frac{S \cdot \cancel{\sin 78}}{\cancel{\sin 78}} = \frac{4 \cdot \sin 76}{\sin 78}$$

$$S = 3.968$$

$$S = 180 - 78 - 26 = 76$$

$$\text{Area} = \frac{1}{2}(4)(3.97)\sin(26^\circ)$$

$$\text{Area} = 3.48 \text{ km}^2$$