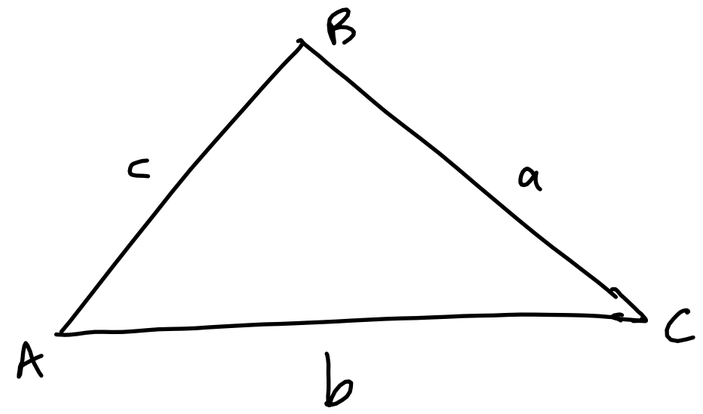
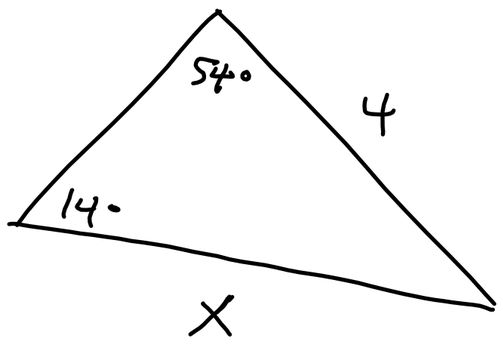
Law of Sines / Cosines



Law of Sines

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

EX →

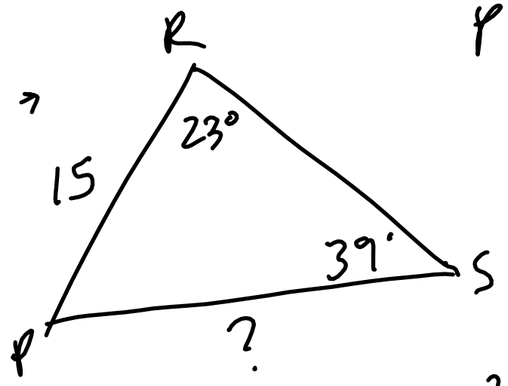


$$\frac{\sin 14}{4} = \frac{\sin 54}{X}$$

$$\frac{X \cdot \sin 14}{\sin 14} = \frac{4 \sin 54}{\sin 14}$$

$$X = 13.377$$

EX →



$PR = 15$

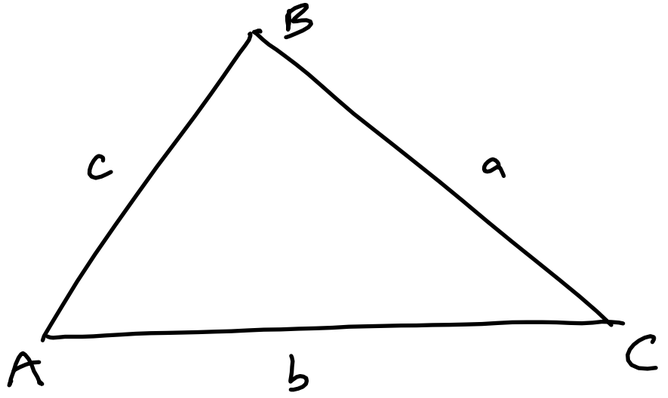
$PS = ?$

$$\frac{\sin 39}{15} = \frac{\sin 23}{X}$$

$$\frac{X \cdot \sin 39}{\sin 39} = \frac{15 \cdot \sin 23}{\sin 39}$$

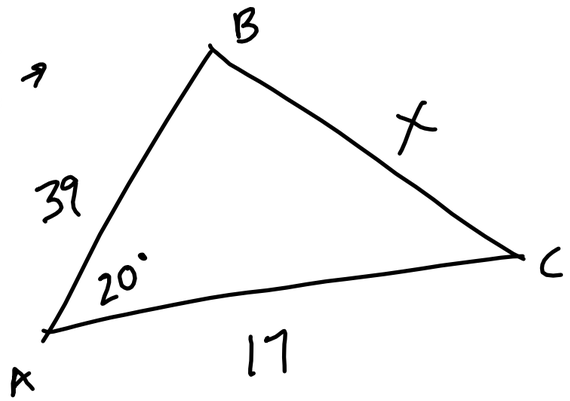
$$X = 9.313$$

Law of Cosines



$$a^2 = b^2 + c^2 - 2bc \cdot \cos A$$

EX →



$$x^2 = 17^2 + 39^2 - 2(17)(39)\cos 20$$

$$\sqrt{x^2} = \sqrt{563.968}$$

$$x = 23.748$$

HW: p. 525 → 6-14 even

p. 530 → 8-16 even