Multiply

1. $(3x-4y)^2$

$(3x-4y)(3x-4y)$

$9x^2-12xy-12xy+16y^2$

$9x^2-24xy+16y^2$

2. $(5x+7y)(5x-7y)$

$25x^2-35xy+35xy-49y^2$

$25x^2-49y^2$

# Sohcahtoa

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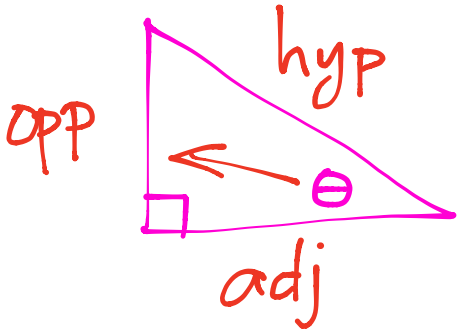
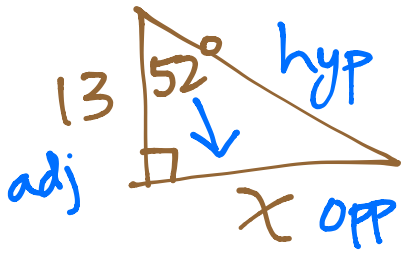



$\theta$ = theta
usually used for angles

$\alpha$ = alpha

$\sin\theta = \frac{opp}{hyp}$ $\cos\theta = \frac{adj}{hyp}$ $\tan\theta = \frac{opp}{adj}$

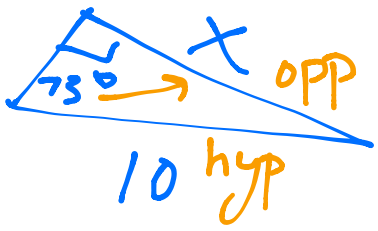
Ex. Solve for x.




$$\frac{\tan 52^\circ}{1} = \frac{x}{13}$$

$$x = 13 \cdot \tan 52^\circ$$

$$x \approx 16.639$$

Ex. 


$$\frac{\sin 73^\circ}{1} = \frac{x}{10}$$

$$x = 10 \cdot \sin 73^\circ$$

$$x \approx 9.563$$

Ex. 

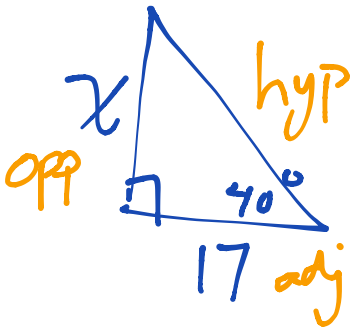

$$\cos\theta = \frac{\text{adj}}{\text{hyp}}$$

$$\frac{\cos 51^\circ}{1} = \frac{13}{x}$$

$$\frac{13}{\cos 51^\circ} = \frac{x \cdot \cos 51^\circ}{\cos 51^\circ}$$

$$x = 13 \div \cos 51^\circ \approx 20.657$$

Ex.




$\tan 40° = \frac{x}{17}$

$x = 17 \cdot \tan 40°$

$x \approx 14.265$

---

Bellwork:

Multiply

① $(5x-9y)^2 \rightarrow (5x-9y)(5x-9y)$

$25x^2 - 45xy - 45xy + 81y^2$

$25x^2 - 90xy + 81y^2$

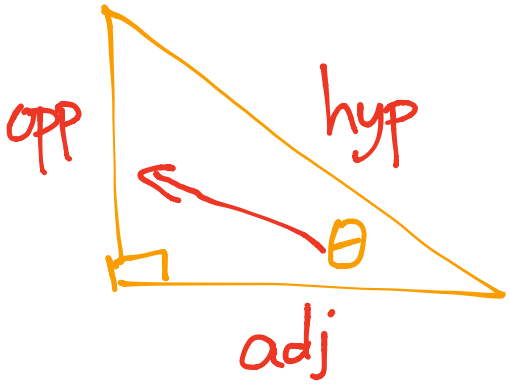
② $(4x+3y)(4x-3y)$

$16x^2 - 12xy + 12xy - 9y^2$

$16x^2 - 9y^2$

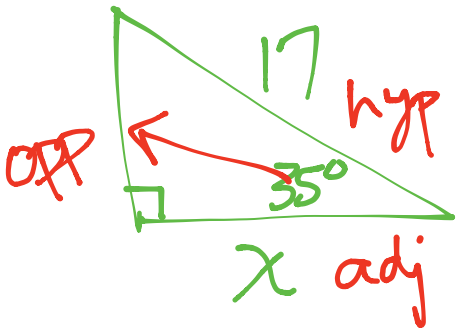
# SohCahToa

θ = theta




$\sin\theta = \frac{opp}{hyp}$ $\cos\theta = \frac{adj}{hyp}$ $\tan\theta = \frac{opp}{adj}$

Ex. Solve for x.

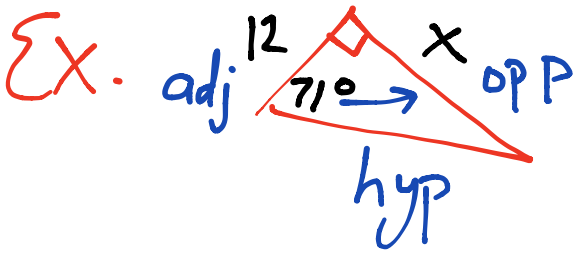



$$\frac{\cos 35^\circ}{1} = \frac{x}{17}$$

$$x = 17\cos 35^\circ$$

$$x = 13.926$$

Ex.

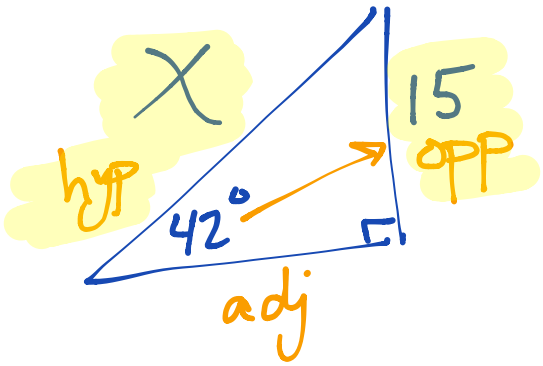



$$\frac{\tan 71^\circ}{1} = \frac{x}{12}$$

$$x = 12 \cdot \tan 71^\circ$$

$$\boxed{x \approx 34.851}$$

Ex.




$$\sin\theta = \frac{opp}{hyp} \rightarrow \frac{\sin 42^\circ}{1} = \frac{15}{x}$$

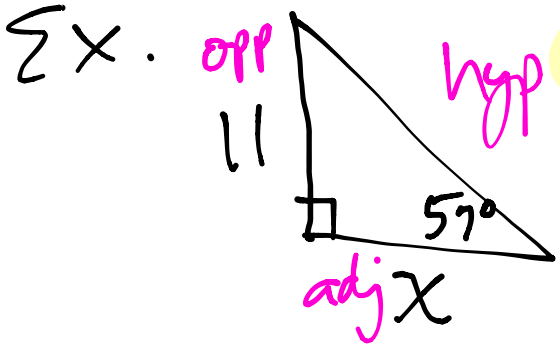
$$x \sin 42^\circ = 15$$

$$\frac{x \sin 42^\circ}{\sin 42^\circ} = \frac{15}{\sin 42^\circ}$$

$x = 15 \div \sin 42^\circ$

$x \approx 22.417$

Ex.




$\tan 57 = \frac{11}{x}$

$1.539 = \frac{11}{x}$

$x = 7.147$

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