

1. Write each in exponential form:

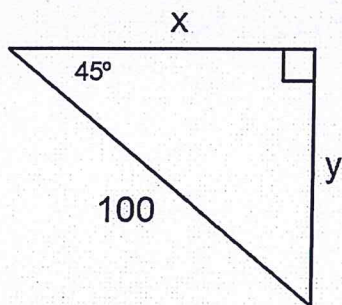
a)  $\log_x 3 = 100$

b)  $\log 40 = x$

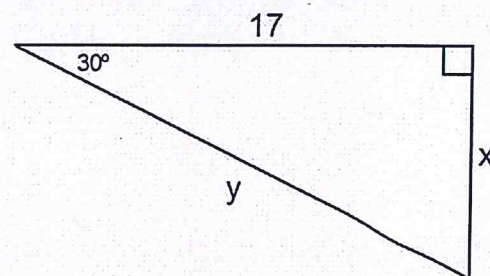
c)  $\ln x = 8$

Find the EXACT value of each variable. Give answers in simplified radical form. Make sure all denominators are rationalized.

2.



3.



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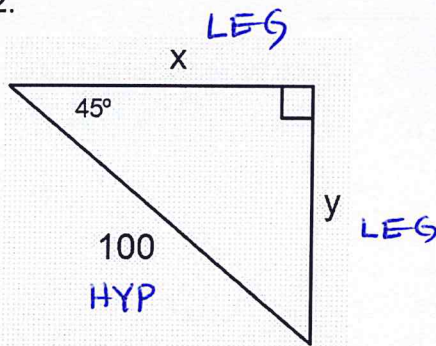
$$x^{100} = 3$$

$$10^x = 40$$

$$e^8 = x$$

Find the EXACT value of each variable. Give answers in simplified radical form. Make sure all denominators are rationalized.

2.



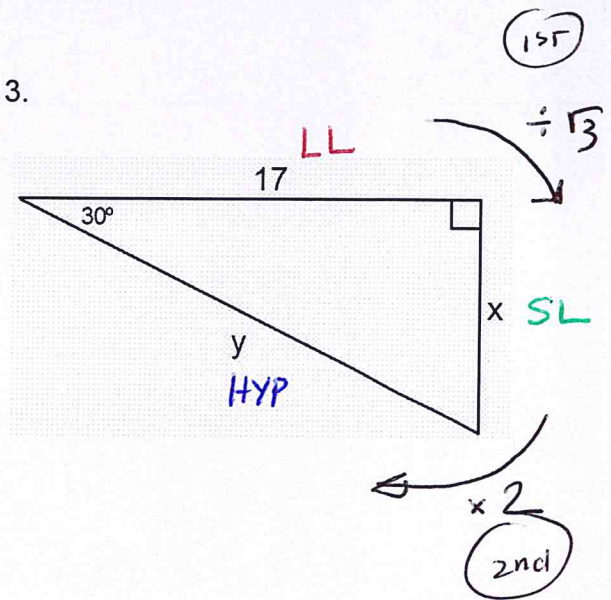
$$x = y = \frac{\text{HYP}}{\sqrt{2}}$$

$$x = y = \frac{100}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$$

$$= \frac{100\sqrt{2}}{2}$$

$$x = y = 50\sqrt{2}$$

3.



1st FIND SL

$$SL = \frac{LL}{\sqrt{3}} = \frac{17}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$$

$$SL = \frac{17\sqrt{3}}{3}$$

2nd FIND HYP

$$\text{HYP} = SL \cdot 2$$

$$= \frac{17\sqrt{3}}{3} \cdot 2$$

$$\text{HYP} = \frac{34\sqrt{3}}{3}$$