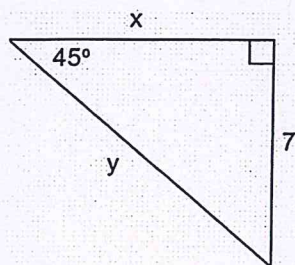## Practice #1   Special Right Triangles   Spring 2020

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

1.

$x =$

$y =$

2.

$x =$

$y =$

3.

$x =$

$y =$

4.

$x =$

$y =$

5.

$x =$

$y =$

Find the EXACT value of each variable in each Special Right Triangle. Give answers in simplified radical form. Make sure all denominators are rationalized.
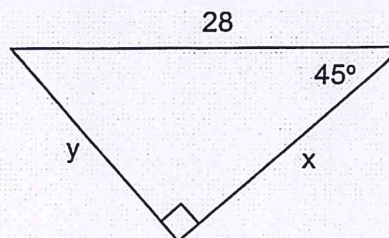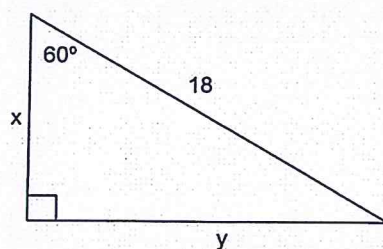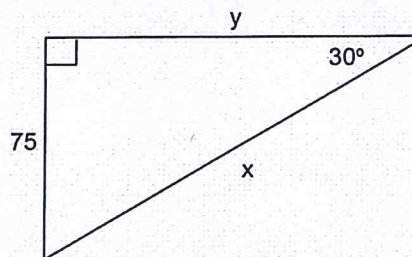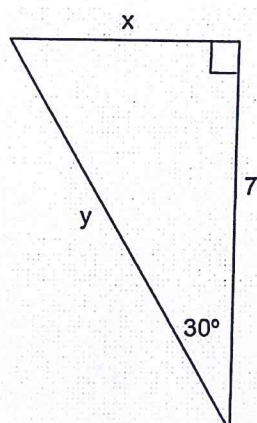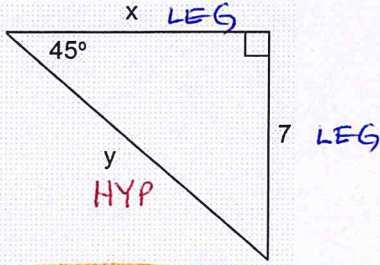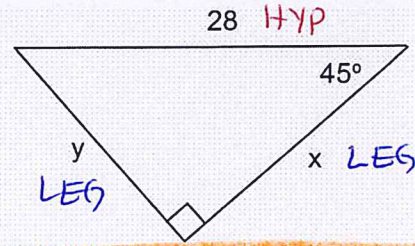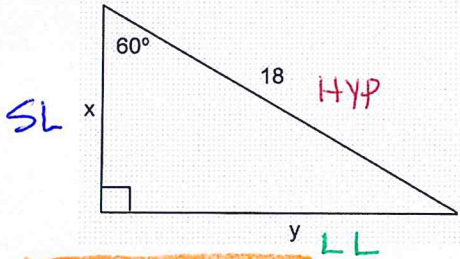
1.   45 - 45 - 90 △

x LEG
45°
7 LEG
y
HYP

$x = \cancel{XX} \; 7$

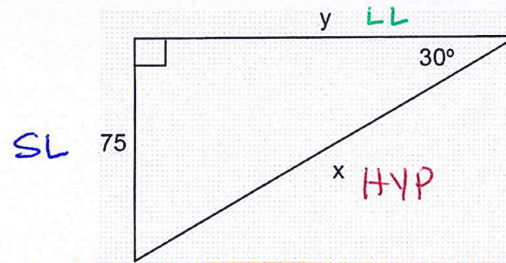$y = 7\sqrt{2}$

2.   45 - 45 - 90 △

28 HYP
45°
y
LEG
x LEG

$x = \dfrac{28}{\sqrt{2}} \cdot \dfrac{\sqrt{2}}{\sqrt{2}} = \dfrac{28\sqrt{2}}{2} = 14\sqrt{2}$
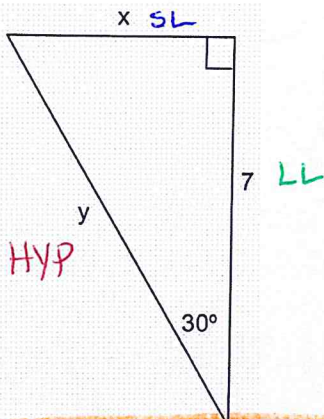
$y = 14\sqrt{2}$

3.   30 - 60 - 90 △

60°
18 HYP
SL x
y LL

$x = 18 \div 2 = 9$

$y = 9 \cdot \sqrt{3}$

4.   30 - 60 - 90 △

y LL
30°
SL 75
x HYP

$x = 75 \cdot 2 = 150$

$y = 75 \cdot \sqrt{3}$

5.   30 - 60 - 90 △

x SL
7 LL
y
HYP
30°

$x = \dfrac{7}{\sqrt{3}} \cdot \dfrac{\sqrt{3}}{\sqrt{3}} = \dfrac{7\sqrt{3}}{3}$

$y = \dfrac{7\sqrt{3}}{3} \cdot 2 = \dfrac{14\sqrt{3}}{3}$

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