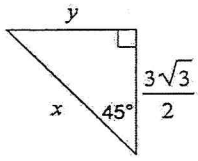
Geometry **45°-45°-90° Δ's** Name KEY ID: 1

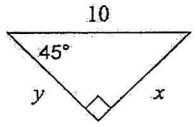
Assignment Date_____ Period____

Find the missing side lengths. Leave your answers as radicals in simplest form.

1) 

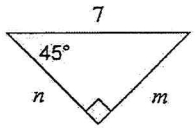
(hypot) $x = \frac{3\sqrt{3}}{2} \cdot \frac{\sqrt{2}}{1} = \frac{3\sqrt{6}}{2}$

$y = \frac{3\sqrt{3}}{2}$ (leg)

2) 

$x = y = \frac{10}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{10\sqrt{2}}{2} = 5\sqrt{2}$

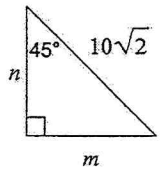
(BOTH LEGS)

3) 

$n = m = \frac{7}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

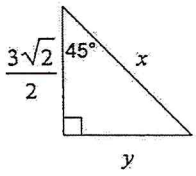
$n = m = \frac{7\sqrt{2}}{2}$

(BOTH LEGS)

4) 

$n = m = \frac{10\sqrt{2}}{\sqrt{2}} = 10$

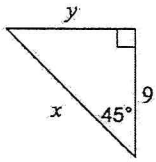
(BOTH LEGS)

5) 

$y = \frac{3\sqrt{2}}{2}$ (leg)

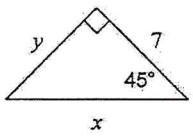
$x = \frac{3\sqrt{2}}{2} \cdot \frac{\sqrt{2}}{1} = \frac{3 \cdot 2}{2} = 3$

(hypot)

6) 

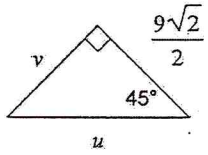
$y = 9$ (leg)

$x = 9\sqrt{2}$ (hypot)

7) 

$y = 7$ (leg)

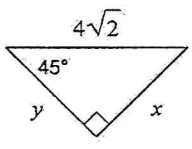
$x = 7\sqrt{2}$ (hypot)

8) 

$v = \frac{9\sqrt{2}}{2}$ (leg)

$u = \frac{9\sqrt{2}}{2} \cdot \frac{\sqrt{2}}{1} = \frac{9 \cdot 2}{2} = 9$

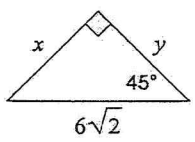
(hypot)

9) 

$x = y = \frac{4\sqrt{2}}{\sqrt{2}}$

$x = y = 4$

(BOTH LEGS)

10) 

$x = y = \frac{6\sqrt{2}}{\sqrt{2}} = 6$

(BOTH LEGS)