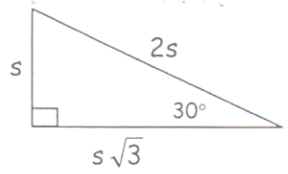
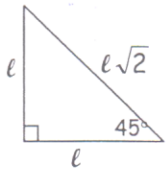
8-3 Special Right Triangles Homework

Name Master Ec 11

Date _____ Block _____

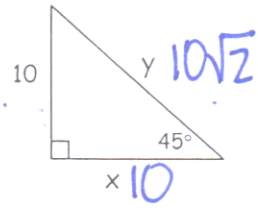




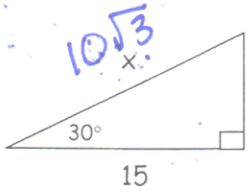
You must know these formulas!

Find the value of x and y in each triangle given. Leave all answers in simplified radical form.

1. x = 10 y = $10\sqrt{2}$



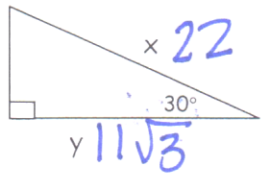
2. x = $10\sqrt{3}$ y = $5\sqrt{3}$



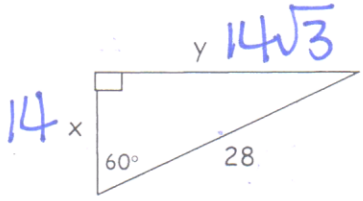
$\frac{15}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{15\sqrt{3}}{3}$

$= 5\sqrt{3}$

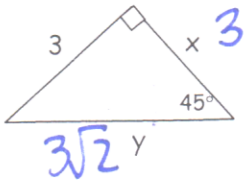
3. x = 22 y = $11\sqrt{3}$



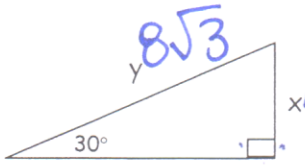
4. x = 14 y = $14\sqrt{3}$



5. x = 3 y = $3\sqrt{2}$

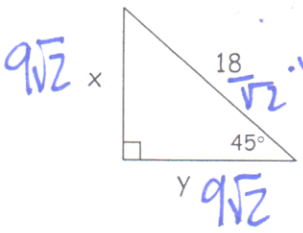


6. x = $4\sqrt{3}$ y = $8\sqrt{3}$



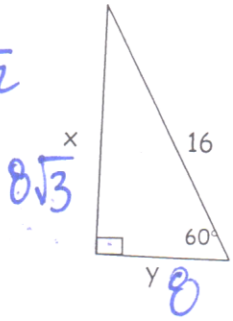
$\frac{12}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{12\sqrt{3}}{3}$

7. x = $9\sqrt{2}$ y = $9\sqrt{2}$

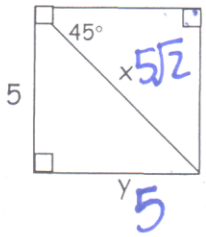


$\frac{18}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{18\sqrt{2}}{2} = 9\sqrt{2}$

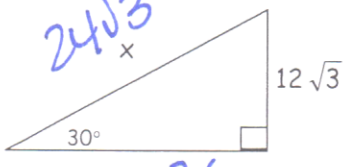
8. x = $8\sqrt{3}$ y = 8



9. x = $5\sqrt{2}$ y = 5



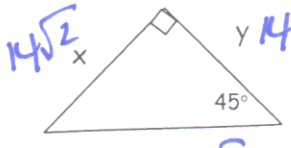
10. x = $24\sqrt{3}$ y = 36



$12\sqrt{3} \cdot \sqrt{3}$

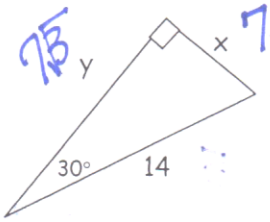
$12 \cdot 3$

11. x = $14\sqrt{2}$ y = $14\sqrt{2}$

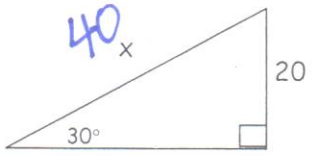


$\frac{28}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{28\sqrt{2}}{2} = 14\sqrt{2}$

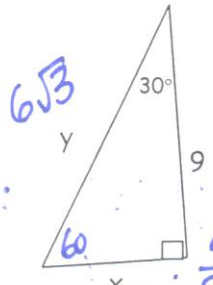
12. x = 7 y = $7\sqrt{3}$



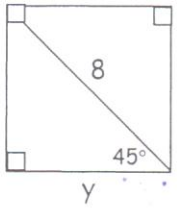
13. x = 40 y = $20\sqrt{3}$ 14. x = $3\sqrt{3}$ y = $6\sqrt{3}$ 15. x = $4\sqrt{2}$ y = $4\sqrt{2}$



$20\sqrt{3}$

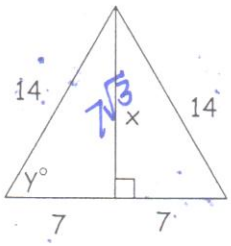


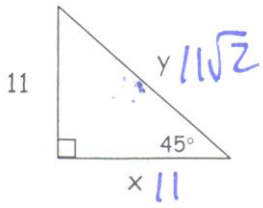
$3\sqrt{3}$ $\frac{9}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}=\frac{9\sqrt{3}}{3}$

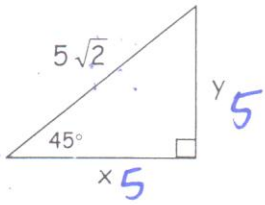


$\frac{8}{\sqrt{2}}\cdot\frac{\sqrt{2}}{\sqrt{2}}=\frac{8\sqrt{2}}{2}$ $4\sqrt{2}$

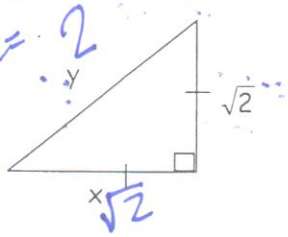
16. x = $7\sqrt{3}$ y = 60 17. x = 11 y = $11\sqrt{2}$ 18. x = 5 y = 5



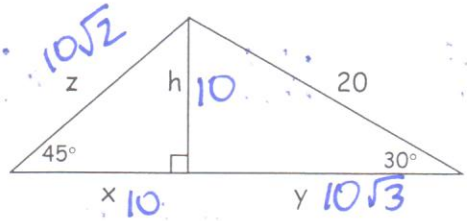




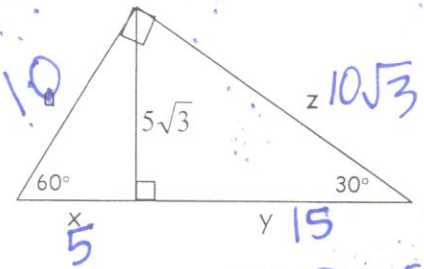
19. x = $\sqrt{2}$ y = 2 20. x = 10 y = $10\sqrt{3}$ z = $10\sqrt{2}$ h = 10



$\sqrt{2}\cdot\sqrt{2}=2$



21. x = 5 y = 15 u = 10 z = $10\sqrt{3}$



$5\sqrt{3}\cdot\sqrt{3}=5\cdot3=15$