

9.1 Simplifying Radicals and Quadratic Equations

1. $\sqrt{32} + \sqrt{18}$
 $4\sqrt{2} + 3\sqrt{2}$
 $7\sqrt{2}$

2. $(\sqrt{5})(\sqrt{60})$
 $2\sqrt{3} \cdot 2\sqrt{5}$
 $4\sqrt{15}$

3. $(4\sqrt{5})^2$

4. $0 = x^2 - 10x + 21$

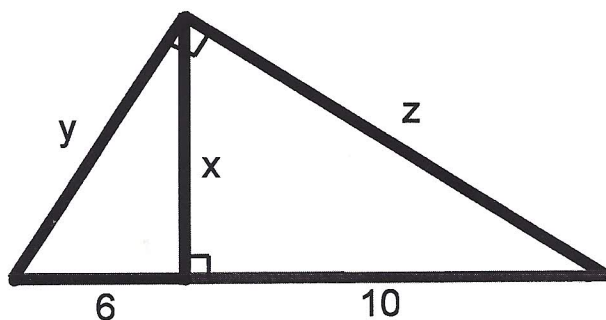
5. $4x^2 - 28x - 240 = 0$

6. $2p^2 - 24 = 9p - 6$

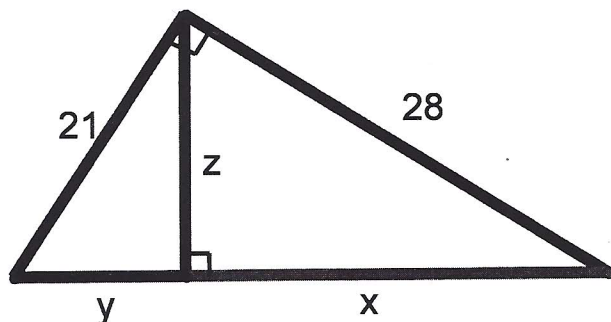
7. Find the geometric mean between $4\sqrt{2}$ and $\sqrt{2}$.

9.3 Altitude on Hypotenuse

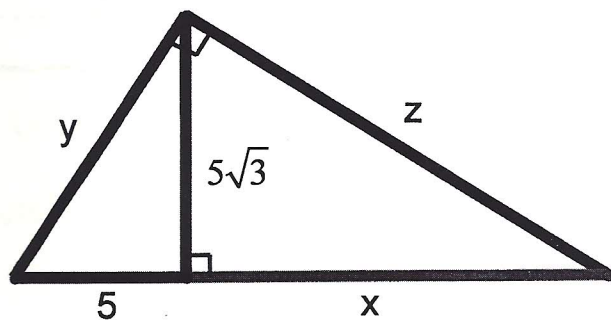
8. Find x , y and z .



9. Find x , y and z .



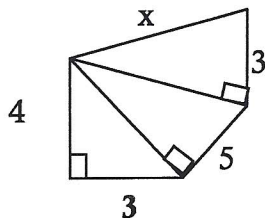
10. Find x , y , and z .



9.4 Pythagorean Theorem

11. Find the diagonal of a rectangle that has dimensions 9 by 40. (Draw a picture.)

12. Find x .



9.5 Distance Formula

13. Find the distance between $(4, -3)$ and $(-7, 6)$.

14. Find the exact perimeter of $\triangle XYZ$ where $X=(17,12)$, $Y=(5,7)$ and $Z=(20,8)$.

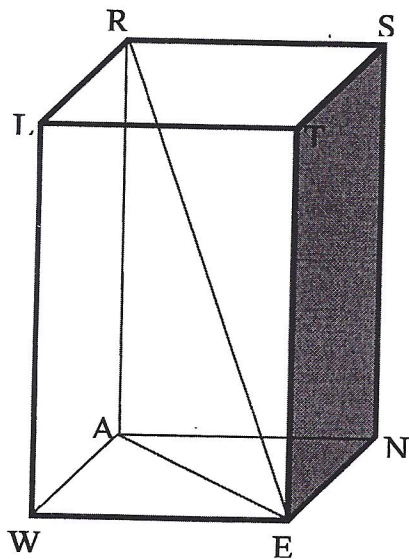
15. Show that the triangle with vertices $A=(3, -2)$, $B=(4,2)$, and $C=(8, 1)$ is a right triangle.

16. Given the following figures, find the missing lengths:

$RS=6$, $ST=8$, and $TE=24$

$AE = \underline{\hspace{2cm}}$

$RE = \underline{\hspace{2cm}}$



$JK=16$ and $PK=15$

$PS = \underline{\hspace{2cm}}$

$PR = \underline{\hspace{2cm}}$

