

1. Estimate as a decimal:

2. Find the distance between (-1,2) and (5,-1).
Leave your answer as a radical.

- a) $\sqrt{66}$ b) $\sqrt{2}$
8.2 1.4

$$6^2 + 3^2 = c^2$$

$$36 + 9 = c^2$$

$$\sqrt{45}$$

$3\sqrt{5}$

#3-18, Simplify each of the following (review).

3. $5\sqrt{18}$

$15\sqrt{2}$

4. $\frac{1}{2}\sqrt{80}$

$2\sqrt{5}$

5. $\sqrt{\frac{4}{5}}$

$\frac{2\sqrt{5}}{5}$

6. $2\sqrt{\frac{1}{2}}$

$\sqrt{2}$

7. $(3\sqrt{6})(7\sqrt{3})$

$63\sqrt{2}$

8. $4\sqrt{2} - 5\sqrt{3} + 7\sqrt{2} - \sqrt{3}$

$11\sqrt{2} - 6\sqrt{3}$

9. $4\sqrt{7} - 3\sqrt{7}$

$\sqrt{7}$

10. $(2\sqrt{10})^2$

40

11. $(\frac{1}{4}\sqrt{3})^2$

$\frac{3}{16}$

12. $(3\sqrt{7} + 2)^2$

$67 + 12\sqrt{7}$

$63 + 12\sqrt{7} + 4$

13. $-2\sqrt{243}$

$-18\sqrt{3}$

14. $15\sqrt{\frac{1}{9}}$

5

15. $(\sqrt{2} + 4)(1 - 5\sqrt{2})$

$\sqrt{2} - 10 + 4 - 20\sqrt{2}$
 $-6 - 19\sqrt{2}$

16. $11\sqrt{6} \cdot -3\sqrt{2}$

$-33\sqrt{12}$
 $-66\sqrt{3}$

17. $\frac{8}{\sqrt{45}} \cdot \frac{8\sqrt{5}}{3\sqrt{5}}$

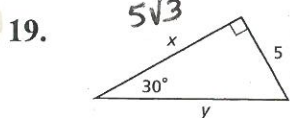
$\frac{8\sqrt{5}}{15}$

18. $\sqrt{3}(3\sqrt{6} + \sqrt{3})$

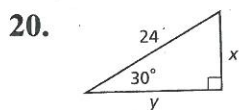
$3\sqrt{18} + \sqrt{9}$
 $9\sqrt{2} + 3$

variables

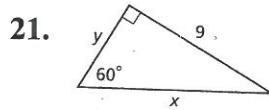
#19-25, Find the missing sides of the triangles. You can use 30-60-90 and 45-45-90 shortcuts.



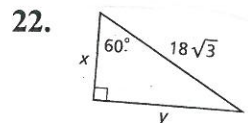
10
 $x = 5\sqrt{3}$
 $y = 10$



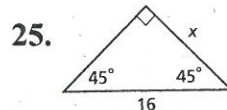
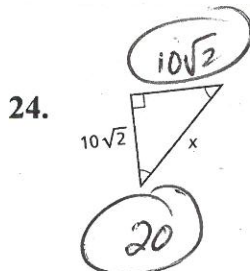
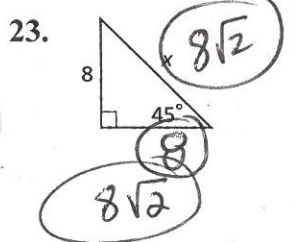
$x = 12$
 $y = 12\sqrt{3}$



$\frac{9}{y} = \frac{\sqrt{3}}{1}$
 $3\sqrt{3} = x$
 $6\sqrt{3} = y$



$\frac{18\sqrt{3}}{x} = \frac{2}{1}$
 $x = 9\sqrt{3}$
 $y = 27$



$\frac{16}{\sqrt{2}} = \frac{x}{1}$
 $\frac{16}{\sqrt{2}}$
 $8\sqrt{2}$