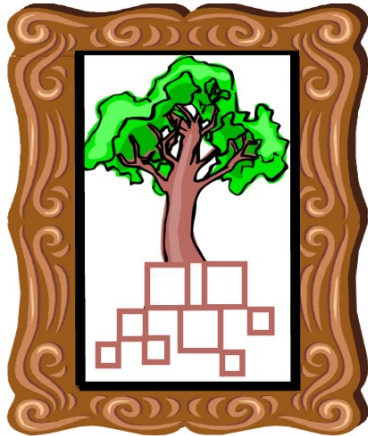


Working with Radicals

Name _____

Directions: Simplify each of these radical expressions. Find the corresponding answer in the column at the right. Write the appropriate letter in the blank beside each problem. Find the title and author of this drawing.



$\overline{12}$ $\overline{13}$ $\overline{3}$ $\overline{2}$ $\overline{16}$ $\overline{2}$ $\overline{4}$ $\overline{2}$ $\overline{15}$ $\overline{1}$

$\overline{7}$ $\overline{4}$ $\overline{5}$ $\overline{11}$ $\overline{17}$ $\overline{18}$ $\overline{9}$

$\overline{7}$ $\overline{10}$ $\overline{5}$ $\overline{14}$ $\overline{3}$ $\overline{1}$ $\overline{3}$ $\overline{18}$ $\overline{18}$ $\overline{4}$ $\overline{7}$ $\overline{12}$

$\overline{8}$ $\overline{17}$ $\overline{17}$ $\overline{18}$ $\overline{20}$ $\overline{6}$ $\overline{2}$ $\overline{19}$ $\overline{19}$ $\overline{18}$ $\overline{6}$

___ 1. $3\sqrt{24}$

___ 2. $2\sqrt{5} - 6\sqrt{5} + 8\sqrt{5}$

___ 3. $4\sqrt{12} + 5\sqrt{3}$

___ 4. $3\sqrt{8} - 4\sqrt{2} + 2\sqrt{16}$

___ 5. $(6\sqrt{3} - 5\sqrt{5}) + (8\sqrt{5} - 8\sqrt{3})$

___ 6. $\sqrt{8} \cdot \sqrt{3}$

___ 7. $4\sqrt{6} \cdot 2\sqrt{2}$

___ 8. $(5 - \sqrt{6})(5 + \sqrt{6})$

___ 9. $(5\sqrt{3})^2$

___ 10. $\frac{3\sqrt{8}}{\sqrt{2}}$

Answer Bank

“ $10\sqrt{5}$

O $14 - 6\sqrt{5}$

A $-4 + 6\sqrt{3}$

P 11

B 19

Q 6

D 4

R $13\sqrt{3}$

E $6\sqrt{6}$

S $16\sqrt{3}$

F 75

T $8 + 2\sqrt{2}$

I $4\sqrt{5}$

U $-2\sqrt{3} + 3\sqrt{5}$

L $4\sqrt{6}$

V $2\sqrt{3}$

M $12 + 14\sqrt{2}$

W $2\sqrt{6}$

N $24\sqrt{5} - 60$

Y -32

___ 11. $\frac{\sqrt{128}}{\sqrt{8}}$

___ 12. $\frac{50\sqrt{120}}{10\sqrt{6}}$

___ 13. $\frac{10\sqrt{20} + 2\sqrt{5}}{2\sqrt{5}}$

___ 14. $(4 - 2\sqrt{3})(5 + 4\sqrt{3})$

___ 15. $\frac{6}{\sqrt{3}}$

___ 16. $(8 - \sqrt{2})(2 + \sqrt{8})$

___ 17. $\frac{48\sqrt{160}}{-6\sqrt{10}}$

___ 18. $(3 - \sqrt{5})^2$

___ 19. $\frac{24}{\sqrt{6}}$

___ 20. $(6\sqrt{2})(2\sqrt{10} - 5\sqrt{2})$