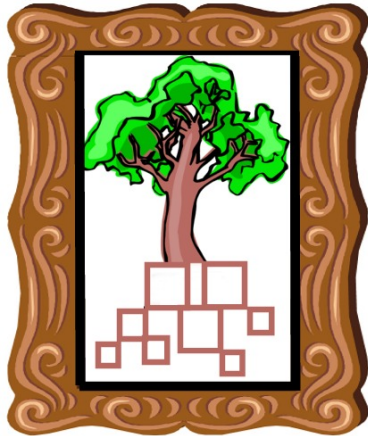


## Working with Radicals

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