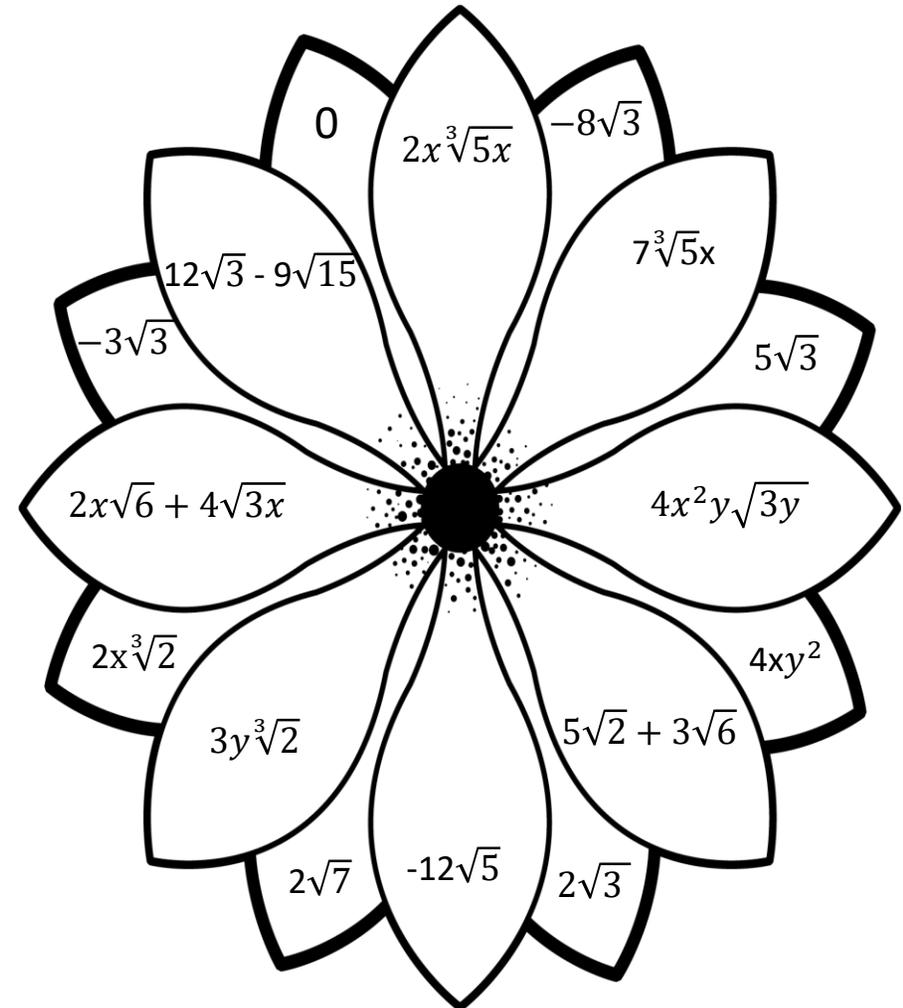Name:

Operations on Radicals Coloring Activity

Choose four different colors - one for each box. Solve the problems below. Color all answers from the same box the same color. Show all your work!

Answers in this box are |

1.) $\sqrt{5} \cdot \sqrt{15} =$

2.) $\sqrt[3]{9y^3} \cdot \sqrt[3]{6} =$

3.) $-5\sqrt{3} - 3\sqrt{3} =$

4.) $\sqrt{2}\,(5 + 3\sqrt{3}) =$

Answers in this box are |

9.) $\sqrt{6x^4}\,(2\sqrt{2y^3}) =$

10.) $\sqrt{2}(\sqrt{6}) =$

11.) $\sqrt[3]{10x^3} \cdot \sqrt[3]{4x} =$

12.) $-3\sqrt{12} + 3\sqrt{3} =$

Answers in this box are |

5.) $\sqrt[3]{40x} + 5\sqrt[3]{5x} =$

6.) $\sqrt{14} \cdot \sqrt{2} =$

7.) $\sqrt{3x}\,(2\sqrt{2x} + 4) =$

8.) $2\sqrt{6} - \sqrt{24} =$

Answers in this box are |

13.) $-2\sqrt{45} - 3\sqrt{20} =$

14.) $\sqrt[3]{54x^3} - \sqrt[3]{2x^3} =$

15.) $3\sqrt{3}(4 - 3\sqrt{5}) =$

16.) $\sqrt{2xy} \cdot \sqrt{8xy^3} =$

Flower petals:

0

$2x\sqrt[3]{5x}$

$-8\sqrt{3}$

$12\sqrt{3} - 9\sqrt{15}$

$7\sqrt[3]{5x}$

$-3\sqrt{3}$

$5\sqrt{3}$

$2x\sqrt{6} + 4\sqrt{3x}$

$4x^2 y\sqrt{3y}$

$2x\sqrt[3]{2}$

$4xy^2$

$3y\sqrt[3]{2}$

$5\sqrt{2} + 3\sqrt{6}$

$2\sqrt{7}$

$-12\sqrt{5}$

$2\sqrt{3}$

Name: **ANSWER KEY**

Operations on Radicals Coloring Activity

Choose four different colors – one for each box. Solve the problems below. Color all answers from the same box the same color. Show all your work!

Answers in this box are ☐

1.) $\sqrt{5} \cdot \sqrt{15} = 5\sqrt{3}$

2.) $\sqrt[3]{9y^3} \cdot \sqrt[3]{6} = 3y\sqrt[3]{2}$

3.) $-5\sqrt{3} - 3\sqrt{3} = -8\sqrt{3}$

4.) $\sqrt{2}\,(5 + 3\sqrt{3}) = 5\sqrt{2} + 3\sqrt{6}$

Answers in this box are ☐

5.) $\sqrt[3]{40x} + 5\sqrt[3]{5x} = 7\sqrt[3]{5x}$

6.) $\sqrt{14} \cdot \sqrt{2} = 2\sqrt{7}$

7.) $\sqrt{3x}(2\sqrt{2x} + 4) =$
   $2x\sqrt{6} + 4\sqrt{3x}$

8.) $2\sqrt{6} - \sqrt{24} = 0$

Answers in this box are ☐

9.) $\sqrt{6x^4}\,(2\sqrt{2y^3}) = 4x^2y\sqrt{3y}$

10.) $\sqrt{2}(\sqrt{6}) = 2\sqrt{3}$

11.) $\sqrt[3]{10x^3} \cdot \sqrt[3]{4x} = 2x\sqrt[3]{5x}$

12.) $-3\sqrt{12} + 3\sqrt{3} = -3\sqrt{3}$

Answers in this box are ☐

13.) $-2\sqrt{45} - 3\sqrt{20} = -12\sqrt{5}$

14.) $\sqrt[3]{54x^3} - \sqrt[3]{2x^3} = 2x\sqrt[3]{2}$

15.) $3\sqrt{3}(4 - 3\sqrt{5}) =$
   $12\sqrt{3} - 9\sqrt{15}$

16.) $\sqrt{2xy} \cdot \sqrt{8xy^3} = 4xy^2$

Flower petals:

$-8\sqrt{3}$

$5\sqrt{3}$

$7\sqrt[3]{5x}$

$4x^2y\sqrt{3y}$

$4xy^2$

$2x\sqrt[3]{5x}$

$5\sqrt{2} + 3\sqrt{6}$

$2\sqrt{3}$

0

$-12\sqrt{5}$

$12\sqrt{3} - 9\sqrt{15}$

$-3\sqrt{3}$

$2x\sqrt{6} + 4\sqrt{3x}$

$3y\sqrt[3]{2}$

$2\sqrt{7}$

$2x\sqrt[3]{2}$