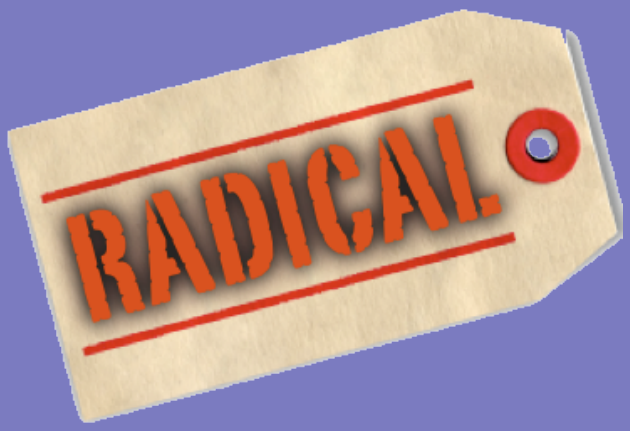
Howdy!!!!

Mr. Watson

Algebra

Jan 5-3:51 PM

Simplify Simple



Aug 1-8:53 PM

Warm Up Simplify the following:

1. $\sqrt{162a}$

$\sqrt{81 \cdot 2 \cdot a}$

$9\sqrt{2a}$

2. $\sqrt{242b^3}$

$\sqrt{121 \cdot 2\, bbb}$

$11b\sqrt{2b}$

3. $\sqrt{75a^2b^3}$

$\sqrt{25 \cdot 3\, aa\, bbb}$

$5ab\sqrt{3b}$

4. $\sqrt{98w^4y^5}$

$\sqrt{49 \cdot 2\, wwwwyyyyy}$

$7w^2y^2\sqrt{2y}$

Algebra 1 Name_____ ID: 1

Day 1 - Simplify Radicals and Multiply Date_____ Period____

Simplify.

1) $-2\sqrt{100}$

2) $-2\sqrt{50}$

3) $-4\sqrt{72}$

4) $-2\sqrt{63}$

5) $3\sqrt{256m}$

6) $-4\sqrt{256m^2}$

7) $-2\sqrt{20x^4y^2}$

8) $-\sqrt{24x^3y}$

9) $\sqrt{6} \cdot -4\sqrt{12}$

10) $5\sqrt{10} \cdot \sqrt{12}$

11) $6\sqrt{15} \cdot \sqrt{15}$

12) $\sqrt{9} \cdot \sqrt{6}$

$\sqrt{54}$

$\sqrt{9 \cdot 6}$

$3\sqrt{6}$

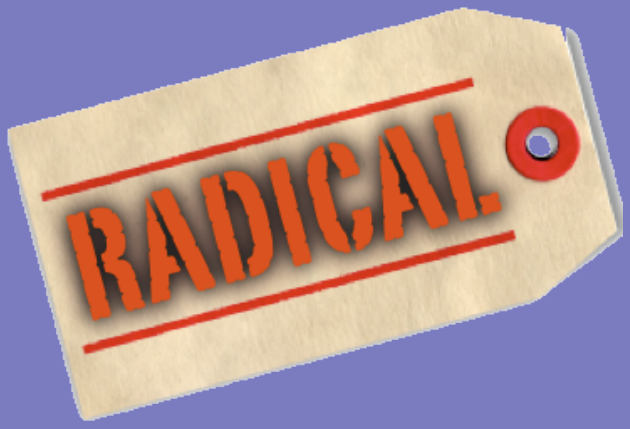
13) $\sqrt{15x^2} \cdot \sqrt{6x}$

$\sqrt{90x^3}$

$\sqrt{9 \cdot 10 \cdot x \cdot x \cdot x}$

$3x\sqrt{10x}$

14) $\sqrt{6v^3} \cdot \sqrt{12v^2}$



Multiplication

Example: $3\sqrt{10} \cdot 4\sqrt{2}$

Aug 1-8:53 PM

Warm Up Simplify the following:

① $\sqrt{3} \cdot \sqrt{8}$

$\sqrt{24}$

$\sqrt{4 \cdot 6}$

$2\sqrt{6}$

② $\sqrt{9} \cdot 2\sqrt{4}$

$2\sqrt{36}$

$\times 6$

12

$2\sqrt{36}$

$2\sqrt{9 \cdot 4}$

$6\sqrt{4}$

12

③ $5\sqrt{x} \cdot 6\sqrt{8x}$

$30\sqrt{8x^2}$

$30\sqrt{4 \cdot 2 \cdot x \cdot x}$

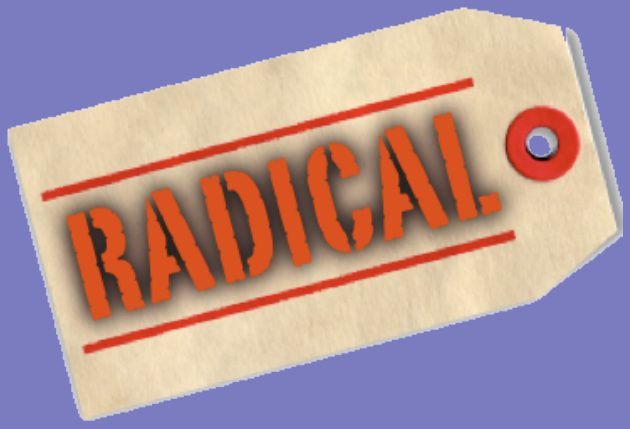
$60x\sqrt{2}$

④ $3\sqrt{8a} \cdot 4\sqrt{11a^2}$

$12\sqrt{88a^3}$

$12\sqrt{4 \cdot 22 \cdot a \cdot a \cdot a}$

$24a\sqrt{22a}$



Addition

Example: $2\sqrt{8} + 2\sqrt{8}$

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① $3\sqrt{6} - 4\sqrt{6}$ $-1\sqrt{6}$ $-\sqrt{6}$ $3x - 4x$ $-1x$ ① Simplify	② $-3\sqrt{7} + 4\sqrt{7}$ $1\sqrt{7}$ $\sqrt{7}$ ② Combine Like Radicals
③ $-11\sqrt{21} - 11\sqrt{21}$ $-22\sqrt{21}$	④ $-9\sqrt{15} + 10\sqrt{15}$ $1\sqrt{15}$

5) $-2\sqrt{3} + 3\sqrt{27}$

$3\sqrt{9 \cdot 3}$

$\times 3$

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

$7\sqrt{3}$

6) $2\sqrt{6} - 2\sqrt{24}$

$-2\sqrt{6 \cdot 4}$

$2\sqrt{6} - 4\sqrt{6}$

$-2\sqrt{6}$

7) $-\sqrt{12} + 3\sqrt{3}$

$-\sqrt{3 \cdot 4}$

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

$1\sqrt{3}$

8) $3\sqrt{3} - \sqrt{27}$

$-\sqrt{9 \cdot 3}$

$3\sqrt{3} - 3\sqrt{3}$

$0\sqrt{3}$

0

(9) $3\sqrt{8} + 3\sqrt{2}$

$3\sqrt{4 \cdot 2}$

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

$9\sqrt{2}$

(10) $2\sqrt{45} - 2\sqrt{5}$

$2\sqrt{9 \cdot 5}$

$6\sqrt{5} - 2\sqrt{5}$

$4\sqrt{5}$

(11) $-3\sqrt{2} + 3\sqrt{20} - 3\sqrt{8}$

$3\sqrt{4 \cdot 5} \quad -3\sqrt{4 \cdot 2}$

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

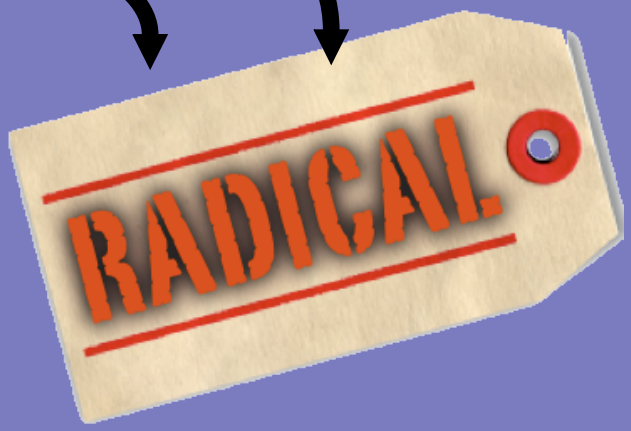
$-9\sqrt{2} + 6\sqrt{5}$

$\cancel{-3\sqrt{7}}$

(12) $-3\sqrt{5} - \sqrt{6} - \sqrt{5}$

$-4\sqrt{5} - \sqrt{6}$

Distribute



Example $\sqrt{3}\left(5+\sqrt{3}\right)$

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① $2\sqrt{5}(\sqrt{6}+2)$

$2\sqrt{30}+4\sqrt{5}$

② $-3\sqrt{3}(2+\sqrt{6})$

$-6\sqrt{3}-3\sqrt{18}$

$-3\sqrt{9\cdot 2}$

$-6\sqrt{3}-9\sqrt{2}$

③ $\sqrt{10}(2+\sqrt{10})$

$2\sqrt{10}+\sqrt{100}$

$2\sqrt{10}+10$

④ $\sqrt{3}(-5\sqrt{10}+\sqrt{6})$

$-5\sqrt{30}+\sqrt{18}$

$+\sqrt{9\cdot 2}$

$-5\sqrt{30}+3\sqrt{2}$

⑤ $\sqrt{14x}\left(3-\sqrt{2x}\right)$	⑥ $\sqrt{6n}\left(7n^3+\sqrt{12}\right)$
⑦ $\sqrt{3v}\left(\sqrt{6}+\sqrt{10}\right)$	⑧ $\sqrt{21r}\left(5+\sqrt{7}\right)$

HW / Practice

Sep 6-9:38 AM

Algebra 1 Name_____ ID: 1

Day 2 - Adding and Subtracting Radicals

Date_____ Period____

Simplify.

1) $6\sqrt{180x^4y^3}$

2) $4\sqrt{28u^3v^3}$

3) $\sqrt{3}+\sqrt{3}$

4) $\sqrt{6}+\sqrt{6}$

5) $-\sqrt{20}+2\sqrt{5}$

6) $2\sqrt{20}-3\sqrt{45}$

7) $\sqrt{3}+\sqrt{3}+\sqrt{3}$

8) $\sqrt{2}+\sqrt{2}+\sqrt{5}$

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

10) $-\sqrt{8}-\sqrt{12}-3\sqrt{12}$

11) $-2\sqrt{8}-2\sqrt{12}+3\sqrt{18}$

12) $-\sqrt{2}-\sqrt{2}+3\sqrt{2}$

13) $\sqrt{15}(2-3\sqrt{6})$

14) $-5\sqrt{6}(2\sqrt{3}+3)$

Attachments

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