

Intro to College Math: Chapter 11.4
Add/subtract Radicals

1. Simplify $\sqrt{80} + 3\sqrt{5}$

$$\sqrt{80} + 3\sqrt{5}$$

$$\boxed{7\sqrt{5}}$$

- or -

$$\sqrt{80} + 3\sqrt{5}$$

$$\underline{4\sqrt{5}} + \underline{3\sqrt{5}}$$

$$\boxed{7\sqrt{5}}$$

↪ Type in each $\sqrt{}$.

• Then since # inside $\sqrt{}$ is the same, we can combine #'s outside $\sqrt{}$

Type into calculator:

- Press "2nd" button + then " x^2 " button.
- Then type in number.
- Then press over button $\left(\begin{smallmatrix} \uparrow \\ \leftarrow \downarrow \rightarrow \end{smallmatrix}\right)$ ← This one
- Then type in # outside $\sqrt{}$ sign
- Then press "2nd" button + then " x^2 " button
- Then type in number.
- Press "enter"

2. Simplify

$$\sqrt{32} + \sqrt{32}$$

$$\boxed{8\sqrt{2}}$$

- or -

$$\sqrt{32} + \sqrt{32}$$

$$\underline{4\sqrt{2}} + \underline{4\sqrt{2}}$$

$$\boxed{8\sqrt{2}}$$

↪ Type in each $\sqrt{}$.

• Then since # inside $\sqrt{}$ is the same, we can combine #'s outside $\sqrt{}$

Type into calculator:

- Press "2nd" button + then " x^2 " button.
- Then type in number.
- Then press over button $\left(\begin{smallmatrix} \uparrow \\ \leftarrow \downarrow \rightarrow \end{smallmatrix}\right)$ ← This one
- Then type in # outside $\sqrt{}$ sign
- Then press "2nd" button + then " x^2 " button
- Then type in number.
- Press "enter"

3. Simplify.

$$\sqrt{200} - 5\sqrt{2}$$

$$\boxed{5\sqrt{2}}$$

-or-

$$\sqrt{200} - 5\sqrt{2}$$


$$10\sqrt{2} - 5\sqrt{2}$$

$$\boxed{5\sqrt{2}}$$

↪ Type in each $\sqrt{}$.

- Then since # inside $\sqrt{}$ is the same, we can combine #'s outside $\sqrt{}$

Type into calculator:

- Press "2nd" button + then " x^2 " button.
- Then type in number.
- Then press over button  This one
- Then type in # outside $\sqrt{}$ sign
- Then press "2nd" button + then " x^2 " button
- Then type in number.
- Press "enter"

4. Combine the following expressions and simplify completely.

$$6\sqrt{8} - 2\sqrt{32} + 3\sqrt{32}$$

$$\underline{12\sqrt{2}} - \underline{8\sqrt{2}} + \underline{12\sqrt{2}}$$

$$\boxed{16\sqrt{2}}$$

↪ Type in each $\sqrt{}$.

- Then since # inside $\sqrt{}$ is the same, we can combine #'s outside $\sqrt{}$