

Simplify each of the radical expressions below. No decimal answers. Assume all variables are positive.

1)  $\sqrt{150}$

2)  $\sqrt{72}$

3)  $\sqrt{63}$

4)  $\sqrt{80}$

5)  $\sqrt{180}$

6)  $\sqrt{24x^3}$

7)  $\sqrt{50x^4y}$

8)  $\sqrt{216xy^2}$

9)  $\sqrt{16x^4y^3}$

10)  $7\sqrt{88}$

11)  $-2\sqrt{27a^3}$

12)  $5b\sqrt{8b^4}$

13)  $4z\sqrt{56y^{10}z^3}$

14)  $\sqrt{81g^4h^2}$

15)  $3a\sqrt{4a^2}$

## 9.1 Self-Reflection

**Part A)** How well are you understanding 3.1 so far? Consider each topic, and then measure your understanding between 0 (not understanding at all) and 5 (am able to help other students on this topic.)

Topic	Ranking (0 to 5)
Recognizing perfect squares	
Simplifying Square Roots with numbers	
Simplifying Square Roots with variables	

**Part B)** Evaluate your *effort* on the 9.1 lesson. Include your effort and focus during notes, as well as during the HW time. Share your thoughts below.

**Part C)** What is your goal for the test on this chapter? Write at least one goal below:

Simplify each of the radical expressions below. No decimal answers. Assume all variables are positive.

1)  $\sqrt{10} \cdot \sqrt{6}$

2)  $2\sqrt{20} \cdot \sqrt{5}$

3)  $\sqrt{24}(\sqrt{8})$

4)  $5\sqrt{10} \cdot 2\sqrt{6}$

5)  $3\sqrt{15} \cdot 4\sqrt{10}$

6)  $(-11\sqrt{14})(3\sqrt{21})$

7)  $-5\sqrt{40} \cdot 3\sqrt{2}$

8)  $(\sqrt{13})^2$

9)  $(4\sqrt{3})^2$

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

11)  $(\sqrt{14})^2$

12)  $\sqrt{\frac{121}{49}}$

13)  $\frac{\sqrt{16}}{\sqrt{9}}$

14)  $\frac{\sqrt{50}}{\sqrt{2}}$

15)  $\frac{18\sqrt{60}}{2\sqrt{3}}$

## 9.2 Reflection

A) What level of frustration did you experience while doing this assignment?

0

1

2

3

4

No frustration

A small amount of frustration

Frustrated half the time

Frustrated most the time

Frustrated all of the time

B) How confident were you on each of the following portions of the assignment? Use the scale below.

0

1

2

3

4

Not confident

Slightly confident

Confident half the time

Confident most the time

Confident all of the time

Portion	Confidence Scale Value
Multiplying with Square Roots	
Squaring Radicals	
Dividing with Square Roots	

C) Answer the questions below.

**Did you use any resources on this assignment to help you be successful?**

**List the resources you used, if any.** Some options can include referencing your notes, using a calculator, asking a friend or family member for help, or finding a video on the internet to help you.

D) Are you proud of your effort on this assignment? Why or why not?

E) List a goal for your next assignment.

Simplify each of the radical expressions below. No decimal answers. Assume all variables are positive.

1)  $\sqrt[3]{16}$

2)  $5\sqrt[3]{27}$

3)  $-4\sqrt[3]{250}$

4)  $\sqrt[3]{432}$

5)  $\sqrt[3]{a^6b^7}$

6)  $\sqrt[3]{8h^{10}}$

7)  $-10x \cdot \sqrt[3]{54x^{13}}$

8)  $-2\sqrt[3]{40y^5z}$

9)  $20^{1/2}$

10)  $32^{1/2}$

11)  $64^{1/3}$

12)  $135^{1/3}$

13)  $(\sqrt{x^{15}})(\sqrt{x^6})$

14)  $-3a\sqrt{8a \cdot 5a^7}$

15)  $2\sqrt{x^8y^4} \cdot 7\sqrt{xy^6}$

**BONUS:** 16)  $8\sqrt{x^3y} \cdot 4\sqrt{xy^6}$

### **9.3 Reflection**

A) What did you understand well from the 9.3 lesson?

B) What do you need additional clarification from on the 9.3 lesson?

C) What resources can you use to get the help you need to be successful in this class?

D) What is one thing you have done in the last week that you are proud of?

Simplify each expression. Rationalize as needed.

1)  $\frac{1}{\sqrt{7}}$

2)  $\frac{1}{\sqrt{14}}$

3)  $\frac{1}{\sqrt{3}}$

4)  $\frac{1}{\sqrt{5}}$

5)  $\frac{-9}{\sqrt{2}}$

6)  $\frac{4}{\sqrt{5}}$

7)  $\frac{20}{\sqrt{10}}$

8)  $\frac{21}{\sqrt{7}}$

9)  $\frac{12}{\sqrt{3}}$

10)  $\frac{-4}{\sqrt{2}}$

11)  $\frac{17}{\sqrt{3}}$

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

13)  $\frac{\sqrt{5}}{\sqrt{30}}$

14)  $\frac{\sqrt{2}}{\sqrt{14}}$

15)  $\frac{3}{\sqrt{12}}$

16)  $\frac{15\sqrt{6}}{5\sqrt{2}}$

17)  $\frac{\sqrt{3}}{\sqrt{24}}$

18)  $\frac{\sqrt{40}}{\sqrt{50}}$

19)  $\frac{6}{\sqrt{18}}$

20)  $\frac{8\sqrt{6}}{2\sqrt{12}}$

21)  $\frac{4}{\sqrt{x}}$

22)  $\frac{5}{3\sqrt{a}}$

23)  $\frac{11}{\sqrt{b}}$

24)  $\frac{9}{3\sqrt{y}}$

## 9.4 Reflection

A) **How much do you agree with this statement?** I showed persistence on this assignment, because I tried the problems that were hard for me, and I gave my best effort even when it was challenging.

1) strongly disagree

2) disagree

3) agree

4) strongly agree

B) **How much do you agree with this statement?** When I felt frustrated on this assignment, I was able to calm myself down and then focus on trying the problems.

1) strongly disagree

2) disagree

3) agree

4) strongly agree

C) **How much do you agree with this statement?** When I needed help on this assignment, I used **appropriate** resources (such as my notes, watching a video, getting help from others) to try to understand the material.

1) strongly disagree

2) disagree

3) agree

4) strongly agree

D) Are you proud of your effort on this assignment? Why or why not?



Simplify each expression. No decimal answers. Assume all variables are positive.

1)  $\sqrt{54}$

2)  $\sqrt{600}$

3)  $\sqrt{120}$

4)  $\sqrt{24x^5y^9}$

5)  $-2x\sqrt{60x^5}$

6)  $\sqrt{50m^2}$

7)  $\sqrt{45} \cdot \sqrt{5}$

8)  $2\sqrt{3} \cdot \sqrt{6}$

9)  $(\sqrt{41})^2$

10)  $(5\sqrt{10})^2$

11)  $\sqrt{\frac{4}{9}}$

12)  $\frac{\sqrt{36}}{\sqrt{25}}$

13)  $\frac{\sqrt{12}}{\sqrt{3}}$

14)  $\sqrt{14a^2b} \cdot \sqrt{21ab^5}$

15)  $\sqrt[3]{54}$

16)  $\sqrt[3]{8h^6j^4}$

**Ch 9 Review Worksheet, continued.**

**Simplify each expression. No decimal answers. Assume all variables are positive. Rationalize as needed.**

17)  $72^{\frac{1}{2}}$

18)  $125^{\frac{1}{3}}$

19)  $375^{\frac{1}{3}}$

20)  $121^{\frac{1}{2}}$

21)  $\frac{1}{\sqrt{5}}$

22)  $\frac{3}{\sqrt{2}}$

23)  $\frac{12}{\sqrt{6}}$

24)  $\frac{-20}{\sqrt{5}}$

25)  $\frac{\sqrt{5}}{\sqrt{30}}$

26)  $\frac{\sqrt{2}}{\sqrt{24}}$

27)  $\frac{1}{\sqrt{a}}$

28)  $\frac{8}{\sqrt{y}}$