

1. Multiply and simplify.

$$\sqrt{7}\sqrt{11}$$

$$\sqrt{7}\sqrt{11} = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed.)

2. Multiply and simplify.

$$(2\sqrt{3})(-8\sqrt{2})$$

$$(2\sqrt{3})(-8\sqrt{2}) = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed.)

3. Multiply and simplify.

$$(3\sqrt{14})(-7\sqrt{2})$$

$$(3\sqrt{14})(-7\sqrt{2}) = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed.)

4. Multiply and simplify.

$$(3 - \sqrt{3})(5 + \sqrt{3})$$

$$(3 - \sqrt{3})(5 + \sqrt{3}) = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

5. Multiply and simplify. Assume that all variables represent nonnegative numbers.

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

$$(3\sqrt{5} + \sqrt{2})(\sqrt{5} - 2\sqrt{2}) = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

6. Multiply and simplify.

$$(\sqrt{2} + 9\sqrt{3})(\sqrt{7} + \sqrt{2})$$

$$(\sqrt{2} + 9\sqrt{3})(\sqrt{7} + \sqrt{2}) = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed.)

7. Multiply and simplify.

$$(\sqrt{2} - 5\sqrt{3})^2$$

$$(\sqrt{2} - 5\sqrt{3})^2 = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

8. Multiply and simplify. Assume that the variable represents a nonnegative number.

$$(8 - 4\sqrt{b})^2$$

$$(8 - 4\sqrt{b})^2 = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed.)

9. Multiply and simplify. Assume that all variables represent nonnegative numbers.

$$(\sqrt{9x-3} - 2)^2$$

$$(\sqrt{9x-3} - 2)^2 = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

10. Divide and simplify.

$$\sqrt{\frac{49}{4}}$$

$$\sqrt{\frac{49}{4}} = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer. Do not type a decimal.)

11. Divide and simplify. Assume that all variables represent positive numbers.

$$\sqrt{\frac{75x}{64y^{12}}}$$

$$\sqrt{\frac{75x}{64y^{12}}} = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Use positive exponents only.)

12. Divide and simplify. Assume that all variables represent nonnegative numbers.

$$\sqrt[3]{\frac{64x^{11}y^{12}}{8}}$$

$$\sqrt[3]{\frac{64x^{11}y^{12}}{8}} = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

13. Divide and simplify. Assume that all variables represent nonnegative numbers.

$$\frac{\sqrt[3]{9y^{11}}}{\sqrt[3]{125x^{12}}}$$

$$\frac{\sqrt[3]{9y^{11}}}{\sqrt[3]{125x^{12}}} = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

14. Simplify by rationalizing the denominator.

$$\frac{9}{\sqrt{5}}$$

$$\frac{9}{\sqrt{5}} = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

15. Simplify by rationalizing the denominator.

$$\sqrt{\frac{25}{7}}$$

$$\sqrt{\frac{25}{7}} = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

16. Rationalize the following denominator and simplify.

$$\frac{1}{\sqrt{2y}}$$

$$\frac{1}{\sqrt{2y}} = \square \text{ (Type an exact answer, using radicals as needed.)}$$

17. Simplify by rationalizing the denominator.

$$\frac{\sqrt{60a}}{\sqrt{6y}}$$

$$\frac{\sqrt{60a}}{\sqrt{6y}} = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

18. Simplify by rationalizing the denominator.

$$\frac{\sqrt{7}}{\sqrt{35x}}$$

$$\frac{\sqrt{7}}{\sqrt{35x}} = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression.)

19. Simplify by rationalizing the denominator.

$$\frac{8}{\sqrt{3x}}$$

$$\frac{8}{\sqrt{3x}} = \square$$

(Type an exact answer, using radicals as needed. Simplify your answer.)

20. Simplify by rationalizing the denominator.

$$\frac{x}{\sqrt{14} - \sqrt{5}}$$

$$\frac{x}{\sqrt{14} - \sqrt{5}} = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression.)

21. Simplify by rationalizing the denominator.

$$\frac{9y}{\sqrt{14} + \sqrt{13}}$$

$$\frac{9y}{\sqrt{14} + \sqrt{13}} = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression.)

22. Simplify by rationalizing the denominator.

$$\frac{\sqrt{13} + \sqrt{3}}{\sqrt{13} - \sqrt{3}}$$

$$\frac{\sqrt{13} + \sqrt{3}}{\sqrt{13} - \sqrt{3}} = \square$$

(Simplify your answer. Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression.)

Date: [REDACTED]
Time: [REDACTED]

Course: MATH110 A013 Sum 15
Book: Tobey: Beginning and Intermediate
Algebra, 4e

Assignment: Week 9: Homework 8.4

23. The cost of fertilizing a lawn is \$0.25 per square foot. Find the cost to fertilize the triangular lawn whose base is $(6 + \sqrt{19})$ feet and altitude is $\sqrt{76}$ feet.

The cost to fertilize the triangular lawn is approximately \$.
(Round to the nearest cent as needed.)