

LESSON PRACTICE

Find the square root and check.

1. $\sqrt{x^2 + 12x + 36}$

2. $\sqrt{x^2 + 14x + 49}$

3. $\sqrt{4x^2 + 4x + 1}$

Divide and Check.

4. $x + 3 \overline{)x^2 + 10x + 21}$

5. $x + 2 \overline{)x^2 + 7x + 10}$

6. $x + 1 \overline{)x^2 + 7x + 6}$

7. $x + 3 \overline{) x^2 + 8x + 15}$

8. $x + 4 \overline{) x^2 + 9x + 20}$

9. $x - 2 \overline{) x^2 + x - 6}$

Challenge.

10. $x - 2 \overline{) x^3 - 5x^2 + 11x - 10}$

11. $x - 3 \overline{) x^3 + x^2 - 19x + 26}$

SYSTEMATIC REVIEW

Find the missing factor. Build if necessary.

1. $X + 1 \overline{) 4X^2 + 10X + 1}$

2. Check #1 by multiplication.

3. $2X + 1 \overline{) 4X^2 + 6X + 5}$

4. Check #3 by multiplication.

5. $X + 4 \overline{) X^2 + 9X + 20}$

6. Check #5 by multiplication.

Find the square's factor, or root.

7. $\sqrt{X^2 + 2X + 1} =$

8. Check #7 by multiplication.

Simplify. Write exponent solutions on one line unless otherwise directed.

9. $(X^4)^3 (Y^2)^6 (Y^2)(Y^0) =$

10. $\frac{A^5}{A^{-3}} =$

Use only positive exponents in the answer for #12.

11. $X^5 X^{-2} \div X^{-4} =$

12. $2XY^{-1} - \frac{3YY^{-2}}{X^{-1}} + 4X^{-1}Y^{-1} =$

Solve.

13. $.234 \times .21 =$

14. $540 \div .15 =$

15. $(-7)(-9) =$

16. $|4 - 8 + 1| =$

Add.

17.
$$\begin{array}{r} 6X^2 - 3X + 2 \\ + X^2 + 5X - 1 \\ \hline \end{array}$$

18.
$$\begin{array}{r} X^2 + 4X - 8 \\ + X^2 - 4X - 9 \\ \hline \end{array}$$

19. What are the factors of 97?

20. Which two operations are commutative?

SYSTEMATIC REVIEW

Find the missing factor. Build if necessary.

$$1. X + 1 \overline{) 2X^2 - X + 10}$$

2. Check #1 by multiplication.

$$3. X + 3 \overline{) 3X^2 + 11X + 6}$$

4. Check #3 by multiplication.

$$5. X + 4 \overline{) 3X^2 + 10X - 9}$$

6. Check #5 by multiplication.

Find the square's factor, or root.

$$7. \sqrt{X^2 + 8X + 16} =$$

8. Check #7 by multiplication.

Simplify. Write exponent solutions on one line unless otherwise directed.

$$9. (A^5 B^7 B^3)^{-2} (A^4) =$$

$$10. \frac{B^4}{AB^{-2}} =$$

11. $.586 \times 1.5 =$

12. $125 \div 2.5 =$

13. $(-7) - 9 =$

14. $|10 \div 2 - 8|$

Add.

15.
$$\begin{array}{r} 7X^2 + 4X - 1 \\ - 2X^2 + 3X + 6 \\ \hline \end{array}$$

16.
$$\begin{array}{r} X^2 + 11X + 5 \\ + X^2 - 8X - 6 \\ \hline \end{array}$$

17. What are the prime factors of 216?

18. Which two operations are associative?

19. Isaac went for a brisk 24-mile walk. Swinging his long arms, he was able to walk six miles per hour. How long did it take him to complete his journey?

20. The next day he was a mite tired. He went for the same 24-mile walk. Swinging his weary arms, he was able to walk only three miles per hour. How long did it take him to complete this journey?