

Question

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1. Question Details

SEssCalcET2 0.Diagnostic.Algebra.001a. [2742997]

Evaluate the expression without using a calculator.

$$(-2)^4$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

2. Question Details

SEssCalcET2 0.Diagnostic.Algebra.001b. [2742863]

Evaluate the expression without using a calculator.

$$-2^4$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

3. Question Details

SEssCalcET2 0.Diagnostic.Algebra.001c. [2742580]

Evaluate the expression without using a calculator.

$$2^{-4}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

4. Question Details

SEssCalcET2 0.Diagnostic.Algebra.001d. [2742975]

Evaluate the expression without using a calculator.

$$\frac{2^{27}}{2^{25}}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

5. Question Details

SEssCalcET2 0.Diagnostic.Algebra.001e. [2742777]

Evaluate the expression without using a calculator.

$$\left(\frac{4}{7}\right)^{-2}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

6. Question Details

SEssCalcET2 0.Diagnostic.Algebra.001f. [2743038]

Evaluate the expression without using a calculator.

$$16^{-3/2}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

7. Question Details

SEssCalcET2 0.Diagnostic.Algebra.002a. [2742669]

Simplify the expression. Write your answer without negative exponents.

$$\sqrt{200} - \sqrt{32}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

8. Question Details

SEssCalcET2 0.Diagnostic.Algebra.002b. [2742788]

Simplify the expression. Write your answer without negative exponents.

$$(3a^3b^4)(4a^2b^2)^2$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

9. Question Details

SEssCalcET2 0.Diagnostic.Algebra.002c. [2742734]

Simplify the expression. Write your answer without negative exponents.

$$\left(\frac{2x^{7/2}y^3}{x^6y^{-1/2}}\right)^{-2}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

10. Question Details

SEssCalcET2 0.Diagnostic.Algebra.003a. [2742787]

Expand and simplify.

$$3(x + 7) + 4(5x - 6)$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

11. Question Details

SEssCalcET2 0.Diagnostic.Algebra.003b. [2742584]

Expand and simplify.

$$(x + 2)(7x - 5)$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

12. Question Details

SEssCalcET2 0.Diagnostic.Algebra.003c. [2742517]

Expand and simplify.

$$(\sqrt{g} + \sqrt{f})(\sqrt{g} - \sqrt{f})$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

13. Question Details

SEssCalcET2 0.Diagnostic.Algebra.003d. [2742587]

Expand and simplify.

$$(2x + 7)^2$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

14. Question Details

SEssCalcET2 0.Diagnostic.Algebra.003e. [2742571]

Expand and simplify.

$$(x + 2)^3$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

15. Question Details

SEssCalcET2 0.Diagnostic.Algebra.004a. [3247825]

Factor the expression.

$$36x^2 - 25$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

16. Question Details

SEssCalcET2 0.Diagnostic.Algebra.004b. [3247827]

Factor the expression.

$$4x^2 + 19x - 30$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

17. Question Details

SEssCalcET2 0.Diagnostic.Algebra.004c. [2742943]

Factor the expression.

$$x^3 - 4x^2 - 4x + 16$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

18. Question Details

SEssCalcET2 0.Diagnostic.Algebra.004d. [2742490]

Factor the expression.

$$x^4 + 8x$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

19. Question Details

SEssCalcET2 0.Diagnostic.Algebra.004e. [2743020]

Factor the expression.

$$3x^{3/2} - 9x^{1/2} + 6x^{-1/2}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

20. Question Details

SEssCalcET2 0.Diagnostic.Algebra.004f. [2742531]

Factor the expression.

$$x^3y - 81xy$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

21. Question Details

SEssCalcET2 0.Diagnostic.Algebra.005a. [2742847]

Simplify the rational expression.

$$\frac{x^2 + 9x + 18}{x^2 - 3x - 18}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Simplify the rational expression.

$$\frac{4x^2 - 3x - 1}{x^2 - 25} \cdot \frac{x + 5}{4x + 1}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Simplify the rational expression.

$$\frac{x^2}{x^2 - 100} - \frac{x + 5}{x + 10}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Simplify the rational expression.

$$\frac{\frac{y - x}{x} - \frac{y}{y}}{\frac{9}{y} - \frac{9}{x}}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Rationalize the numerator and simplify.

$$\frac{\sqrt{81 + h} - 9}{h}$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Rewrite by completing the square.

$$x^2 + 5x + 2$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Rewrite by completing the square.

$$3x^2 - 12x + 17$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Solve the equation. (Find only the real solutions. Enter your answers as a comma-separated list.)

$$x + 4 = 40 - \frac{x}{2}$$

x =

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Solve the equation. (Find only the real solutions. Enter your answers as a comma-separated list.)

$$\frac{2x}{x+9} = \frac{2x-9}{x}$$

x =

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

30. Question Details

SEssCalcET2 0.Diagnostic.Algebra.008c. [2742692]

Solve the equation. (Find only the real solutions. Enter your answers as a comma-separated list.)

$$x^2 - x - 72 = 0$$

x =

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

31. Question Details

SEssCalcET2 0.Diagnostic.Algebra.008d. [2742604]

Solve the equation. (Find only the real solutions. Enter your answers as a comma-separated list.)

$$7x^2 + 14x + 6 = 0$$

x =

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

32. Question Details

SEssCalcET2 0.Diagnostic.Algebra.008f. [2742729]

Solve the equation. (Find only the real solutions. Enter your answers as a comma-separated list.)

$$7|x - 4| = 24$$

x =

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

33. Question Details

SEssCalcET2 0.Diagnostic.Algebra.009a. [2742680]

Solve the inequality. Write your answer using interval notation.

$$-4 < 5 - 3x \leq 29$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Solve the inequality. Write your answer using interval notation.

$$x^2 < 2x + 48$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Solve the inequality. Write your answer using interval notation.

$$x(x - 1)(x + 5) > 0$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Solve the inequality. Write your answer using interval notation.

$$|x - 5| < 1$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

Solve the inequality. Write your answer using interval notation.

$$\frac{2x - 8}{x + 1} \leq 1$$

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

State whether the equation is true or false.

$$(5p + 9q)^2 = 25p^2 + 81q^2$$

- True
 False

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

State whether the equation is true or false.

$$\sqrt{ab} = \sqrt{a}\sqrt{b} \quad \text{for } a, b > 0$$

- True
 False

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

State whether the equation is true or false.

$$\sqrt{64a^2 + 4b^2} = 8a + 2b$$

- True
 False

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.

State whether the equation is true or false.

$$\frac{8 + TC}{C} = 8 + T, \quad \text{for } C \neq 0$$

- True
 False

If you have had difficulty with this problem, you may wish to consult the Review of Algebra on the website StewartCalculus.com.