

Algebra 1 Mastery Test Review #8

1. Write an equation of the line that passes through $(-5, -8)$ and is parallel to the line $y = -4x + 7$.

Solve the system:

2. $2x + y = -5$
 $x + y = -1$

Simplify:

3. $(w^3 c^7)(-5w^5 c)$

Simplify the expression using positive exponents.

4. $\left(\frac{b^3}{c^8}\right)^5$

5. Rewrite using only positive exponents: $-3a^2 b^{-3} c^{-2}$

Name: _____

ID: A

6. The amount of money, A , accrued at the end of n years when a certain amount, P , is invested at a compound annual rate, r , is given by $A = P(1+r)^n$. If a person invests \$160 in an account that pays 7% interest compounded annually, find the balance after 10 years.

7. Find the value of \$1000 deposited for 8 years in an account paying 8% annual interest compounded semiannually.

Find the sum.

8. $(2a^7 + 3a^3 - 6) + (-2a^3 + 4 + 6a^7)$

Find the difference.

9. $(6b^3 + 3b^2 + 8) - (2b^3 - 8b^2 + 6b - 5)$

Find the product.

10. $(x+5)(x+2)$

Find the product.

11. $(5c+6)(5c-6)$

Name: _____

ID: A

12. Solve the equation $(x - 6)(x + 9) = 0$.

Factor the polynomial.

13. $x^2 + 6x + 5$

14. $x^2 - 16x + 63$

Solve the equation.

15. $x^2 + 6x - 27 = 0$

16. $x^2 - 6x - 16 = 0$

Factor the trinomial.

17. $5x^2 + 43x + 24$

Solve the equation.

18. $16g^2 + 40g + 25 = 0$

Algebra 1 Mastery Test Review #8

Answer Section

1. ANS:
 $y = -4x - 28$

TOP: Lesson 4.5 Write Equations of Parallel and Perpendicular Lines

2. ANS:
 $(-4, 3)$

TOP: Lesson 6.3 Solve Linear Systems by Adding or Subtracting

3. ANS:
 $-5w^8c^8$

TOP: Lesson 7.1 Apply Exponent Properties Involving Products

4. ANS:
 $\frac{b^{15}}{c^{40}}$

TOP: Lesson 7.2 Apply Exponent Properties Involving Quotients

5. ANS:
 $\frac{-3a^2}{b^3c^2}$

TOP: Lesson 7.3 Define and Use Zero and Negative Exponents

6. ANS:
 $\$315$

TOP: Lesson 7.4 Write and Graph Exponential Growth Functions

7. ANS:
 $\$1872.98$

TOP: Lesson 7.4 Write and Graph Exponential Growth Functions

8. ANS:
 $8a^7 + a^3 - 2$

TOP: Lesson 8.1 Add and Subtract Polynomials

9. ANS:
 $4b^3 + 11b^2 - 6b + 13$

TOP: Lesson 8.1 Add and Subtract Polynomials

10. ANS:
 $x^2 + 7x + 10$

TOP: Lesson 8.2 Multiply Polynomials

11. ANS:
 $25c^2 - 36$

TOP: Lesson 8.3 Find Special Products of Polynomials

12. ANS:
6, -9

TOP: Lesson 8.4 Solve Polynomial Equations in Factored Form

13. ANS:
 $(x + 1)(x + 5)$

TOP: Lesson 8.5 Factor $x^2 + bx + c$

14. ANS:
 $(x - 9)(x - 7)$

TOP: Lesson 8.5 Factor $x^2 + bx + c$

15. ANS:
-9, 3

TOP: Lesson 8.5 Factor $x^2 + bx + c$

16. ANS:
-2, 8

TOP: Lesson 8.5 Factor $x^2 + bx + c$

17. ANS:
 $(5x + 3)(x + 8)$

TOP: Lesson 8.6 Factor $ax^2 + bx + c$

18. ANS:
 $g = -\frac{5}{4}$

TOP: Lesson 8.7 Factor Special Products