

Seminole Ridge Community High School

Algebra 1 Summer Review Packet



Compute. Use order of operations. Show all work!

1. $36 - 4 + \sqrt{25}$
2. $8(3 + 7) - 5$
3. $7(6) - 40 \div 5$
4. $15 + 18 \div 3^2 - 6$
5. $\sqrt{36} \div (15 - 9) 4$
6. $(8 - 3)^2 \cdot (14 - 8)$
7. $\frac{(12 - 5) \cdot 6}{7 - 4}$
8. $\frac{80 \div (6 - 2)}{35 \div 7}$
9. $2^4 + [5^2 - (13 + 7)]$
10. $40 - 2(15)$
11. $6(8 - 4) + 5$
12. $9(4) - 24 \div \sqrt{16}$
13. $15 - 2(3)$
14. $98 - (36 + 15)$
15. $(98 - 36) + 15$
16. $17 + 3(4 + 2)$
17. $38 - 5(3 + 4)$
18. $5(8 + 4) - |12|$
19. $7(1 + 9) - 44$
20. $(24 - 9) - (1 + 3)$
21. $(50 + 16) - (17 - 6)$
22. $\frac{8 + 7}{7 - 2}$
23. $\frac{40}{4(2)}$
24. $\frac{4(3)}{14 - 4}$
25. $\frac{6(8 - 3)}{2}$
26. $\frac{8}{2} + \sqrt{121}$
27. $\frac{9}{3} - 1$
28. $|-7| + \frac{18}{3(3)}$
29. $\frac{9(2)}{6} + 4$
30. $12 - \frac{8(5)}{4}$

Use grouping symbols to make each statement true.

31. $25 - 8 \cdot 3 = 51$
32. $9 + 4 \cdot 5 - 3 = 17$
33. $9 + 9 \div 3 \cdot 5 - 3 = 12$
34. $6 \cdot 5 - 5^2 + 2 = 3$

Write as an algebraic expression.

1. 7 less than 4 times a number

2. 11 more than half a number

3. 6 less than twice w

4. the sum of triple z and half of x

5. 5 more than the product of 14 and y

6. $\frac{1}{2}$ the difference of a number and 15

7. double the sum of x and 5

8. 4 less than the quotient of x and -5

Use the distributive property to write an equivalent expression.

1. $5(5 + c)$ _____

2. $-8(y + 2)$ _____

3. $(m + 1)9$ _____

4. $-3(2a + 5)$ _____

5. $4(y + 3z)$ _____

6. $(2a + 3b)4$ _____

Combine like terms.

7. $17c + 6c$ _____

8. $3y + 7x + 5y$ _____

9. $3a + 16 + 9a + 2a$ _____

10. $5m + 11n + 11m + 5n$ _____

11. $4(x + 5) + 8x + 7$ _____

12. $36 - 72t + 4t$ _____

Scientific Notation

Write using standard notation.

13. 6.781×10^5 _____

14. 2.001×10^{-2} _____

15. 7.61×10^{-5} _____

16. 3.114×10^3 _____

Write using scientific notation.

17. 6,821,000 _____

18. 0.810001 _____

19. 0.00000671 _____

20. 2,631 _____

Addition and Subtraction Equations

SR3

Solve each equation. Show algebra steps.

1. $z + 16 = 4$

2. $0 = m + 17$

3. $-3 = j + 5$

4. $h + 13 = 21$

5. $9 + g = -20$

6. $-7 + d = -26$

7. $a - 20 = -3$

8. $w - 18 = 7$

9. $t - 19 = 23$

10. $-9 = k - 11$

11. $-15 = n - 22$

12. $27 = x - 14$

13. $-8 + b = -5$

14. $t - 24 = 12$

15. $-28 + p = -3$



Write *true* or *false*. If false, explain why.

16.) The only prime factors of 252 are 2, 3, and 7.

17.) The GCF of 14 and 15 is 1.

18.) The prime factorization of 63 is 3×21 .

19.) The only prime factors of a power of 10 are 2 and 5.

20.) The GCF of 27 and 45 is 3.

21.) If the GCF of two numbers is 1, the numbers have no common factors.

22.) Every multiple of 4 is a multiple of 16.

Solve. There are two numbers.

23.) One number is 10. The unknown number is less than 10. The GCF of the numbers is 2. Their LCM is 30. What is the unknown number?



Multiplication and Division Equations

Solve each equation. Show perfect algebra steps.

1. $-6y = -84$

2. $\frac{7}{8}t = 49$

3. $440 = 15a$

4. $-136 = -17k$

5. $126 = -21p$

6. $0.15c = 600$

7. $\frac{d}{-9} = 11$

8. $\frac{p}{8} = 4\frac{1}{4}$

9. $22 = \frac{g}{-32}$

10. $-2.1 = \frac{r}{14}$

11. $-15 = \frac{w}{-12}$

12. $\frac{z}{-18} = 18$

Write and solve an equation. Set up the variable first (let $x =$)

13. Joan's age is triple the age of her daughter. If Joan is 42 years old, how old is her daughter?

14. I have a secret number. Seven more than quadruple my number equals -5. What is my number?

15. Sam and three friends are splitting a pizza. If each person pays \$4.50, what was the cost of the pizza?

Integer PracticeEvaluate. Let $x = 6$, $y = -4$, and $z = 10$

1.) $x - y =$ _____

2.) $x^2 + y^2 =$ _____

3.) $xy + z =$ _____

4.) $3yz - 40 =$ _____

5.) $x^2 + x =$ _____

6.) $5z - y =$ _____

7.) $\frac{y+z}{x} =$ _____

8.) $\frac{xz}{y} =$ _____

Compute.

9) $(-3)^2(-2)^3$

10) $(-3)(-12)(-1)$

11) $(-7)(5)(-4)$

12) $\frac{-6 + (-3) + (-7)}{4}$

13) $\frac{-60}{-3} + \frac{-48}{4}$

14) $\frac{-9 \cdot 5}{3}$

15) $-5 \cdot 2 \cdot 53$

16) $-1(-6) + 8(-2)$

17) $(-2)(-3) + (-1)(7)$

18) $-8 + 17 + (-3)$

19) $(-9)^2(-1)^5$

20) $(-4)^3$

21) $\frac{-72}{8} + \frac{-56}{7}$

22) $(-8)(-1)(4)(-3)$

23) $\frac{(-4)(-25)}{5}$

24) $(-3 \cdot 7) + (-2 \cdot 4)$

25) $\frac{9(-4)}{-2}$

26) $\frac{-19 + (-11)}{6}$

27) $\frac{170}{-10} + \frac{96}{12}$

28) $\frac{-32}{2} + \frac{-75}{-15}$

29) $80 + (-50) + (-70)$

Summer Review Packet

Answer Key

SR #1

1. 37
2. 13
3. 34
4. 11
5. 4
6. 150
7. 14
8. 4
9. 3.2
10. 10
11. 29
12. 30
13. 9
14. 47
15. 77
16. 35
17. 3
18. 48
19. 26
20. 11
21. 55
22. 3
23. 5
24. 1.2
25. 15
26. 15
27. 2
28. 9
29. 7
30. 2
31. $(25-8) \cdot 3 = 51$
32. $9+4 \cdot (5-3) = 17$
33. $(9+9) \div 3 \cdot (5-3) = 12$
34. $6 \cdot 5 - (5^2 + 2) = 3$
1. $4n - 7$
2. $\frac{n}{2} + 11$
3. $2w - 6$
4. $3z + \frac{1}{2}x$
5. $14y + 5$
6. $\frac{1}{2}(n - 15)$
7. $2(x + 5)$
8. $\frac{x}{-5} - 4$

SR #2

1. $25 + 5c$
2. $-8y - 16$
3. $9m + 9$
4. $-6a - 15$
5. $4y + 12z$
6. $8a + 12b$
7. $23c$
8. $7x + 8y$
9. $14a + 16$
10. $16m + 16n$
11. $12x + 27$
12. $36 - 68t$
13. 678,100
14. 0.02001
15. 0.0000761
16. 3,114
17. 6.821×10^6
18. 8.10001×10^{-1}
19. 6.71×10^{-6}
20. 2.631×10^3

SP #4

1. $y = 14$
2. $t = 56$
3. $a = 29.333\ldots$
4. $k = 8$
5. $p = -6$
6. $c = 4000$
7. $d = -99$
8. $f = 34$
9. $g = -704$
10. $r = -29.4$
11. $w = 180$
12. $z = -324$
13. let $x =$ daughter's age
 $42 = 3x$, $x = 14$ years old
14. let $x =$ secret number
 $4x + 7 = -5$, $x = -3$
15. let $x =$ pizza cost
 $\frac{x}{4} = 4.50$, $x = \$18$

SR #3

1. $z = -12$
2. $m = -17$
3. $j = -8$
4. $h = 8$
5. $g = -29$
6. $d = -19$
7. $a = 17$
8. $w = 25$
9. $t = 42$
10. $k = 2$
11. $n = 7$
12. $x = 41$
13. $b = 3$
14. $t = 36$
15. $p = 25$

SP #5

1. 10
2. 52
3. -14
4. -160
5. 42
6. 54
7. 1
8. -15
9. -72
10. -36
11. 140
12. -4
13. 8
14. -15
15. -530
16. -10
17. -1
18. 6
19. -81
20. -64
21. -17
22. -96
23. 20
24. -29
25. 18
26. -5
27. -9
28. -11
29. -40