

Hello darlings!

Here is your summer math packet! It contains a review of skills that you learned this past year that are critical to your success in Algebra. Please show all of your work (neatly!) and circle your answers. We're going to have a great year!!!

Equations

Solve the equation.

1. $7x + 12 = 26$

2. $-2x - 47 = -11$

3. $-14 = -22 - \frac{x}{3}$

4. $-15 = \frac{x-12}{2}$

5. $70 = 19 - 3x$

6. $\frac{2}{3}x = -1$

7. $-\frac{9}{4} = -\frac{5}{4}x$

8. $\frac{2}{5}x = -\frac{1}{10}$

9. $-3(8x + 11) = 6(-4x - 13)$

10. $-9x + 15 = -22 - 4(x + 12)$

Inequalities

1. $-6x - 15 > 57$

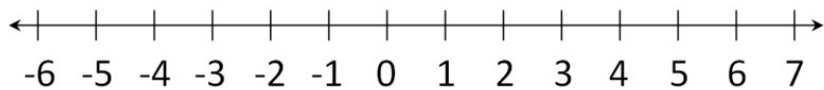
2. $-3(2 - x) \leq 2x - 9$

3. $-8 < \frac{5x+4}{7}$

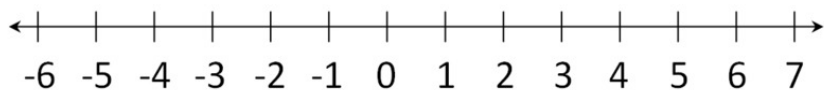
4. $\frac{-x-11}{3} \leq 21$

Graph the inequality.

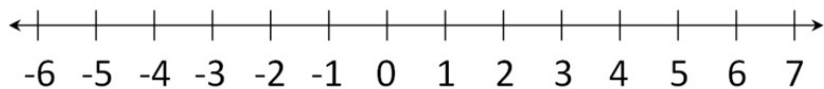
5. $x > -5$



6. $x \leq 3$



7. $x - 11 < -11$



Order of Operations

Evaluate the expression.

1. $2.5[10 + (20 - 2^2)]$

2. $3.1[100 - (5^2 \cdot 3)]$

3. $9(3 + 5^3)$

4. $\frac{17+2 \cdot 8}{25-14}$

Evaluate the expression when $a = 16$, $b = 8$, and $c = 7$.

5. $\frac{2a}{15-c}$

6. $b(a - 9.1)$

7. $ac[(99 - b^2) \cdot 2]$

8. $c^3[4.1(3c - 19)]$

9. $7.2b - bc$

10. $(c + 5) \div 6$

Exponents

Find the product or quotient. Write your answer using only exponents.

1. $5^{10} \cdot 5^{11}$

2. $\frac{3^{16}}{3^8}$

3. $8^2 \cdot 8^{14} \cdot 8^3$

Simplify.

4. $3h^5 \cdot 4h^6$

5. $\frac{9y^{18}}{15y^2}$

6. $\frac{6h^{11} \cdot 7h^6}{28h^3}$

7. $(3x^2)^3$

8. $(2xy^2z^3)^2$

Find the product or quotient. Write your answer using only positive exponents.

9. $11^2 \cdot 11^{-4}$

10. $t^8 \cdot t^{-4}$

11. $3s^0 \cdot 8s^{-5}$

12. $\frac{18a^{-20}}{8a^9}$

13. $\frac{w^3y^{13}}{w^{11}y^6}$

14. $\frac{14r^3}{r^{-8}}$

GCF

Find the GCF of the monomials.

1. $12rst, 42r^2s^3t^2, rt^5$

2. $16abc^2, 18y^3, 6x$

3. $32xy, 20y^2$

Radicals

1. $\sqrt{216v}$

2. $\sqrt{216k^4}$

3. $\sqrt{64m^3n^3}$

4. $\sqrt{16u^4v^3}$

5. $\sqrt{28x^3y^3}$

6. $6\sqrt{72x^2}$

7. $-3\sqrt{24a^4b^2c^3}$

8. $4\sqrt{36x^2y^3z^4}$