

Algebra 2/Algebra 2 Honors

Summer Assignment 2022-2023

This assignment should be completed over the summer and turned into your Teacher the First week of School.

ALL WORK MUST BE SHOWN TO RECEIVE CREDIT!

1. Evaluate $3x - \frac{x}{2} + 4y - 2y^3$ when $x=-2$
and $y=3$.

6. $\frac{a^7}{a^3}$

7. $(5a^2b^{-3}c^{-4})^2$

2. Find the equation of the line in slope-intercept form that goes through the points $(2,3)$ and $(-6,-5)$

For problems 8-9, simplify.

8. $(x + 2)(x + 3)$

9. $(x - 5)^2$

For Problems 3-7, simplify the expression. Answer must be in terms of positive exponents.

3. $(6x^3)(x^2)$

For Problems 10-13, factor completely

10. $x^2 - 10x + 9$

11. $x^2 - 12x - 45$

4. $(5x)^0$

12. $x^2 - 64$

5. $(x^4)^3$

13. $4x^2 + 8x - 5$

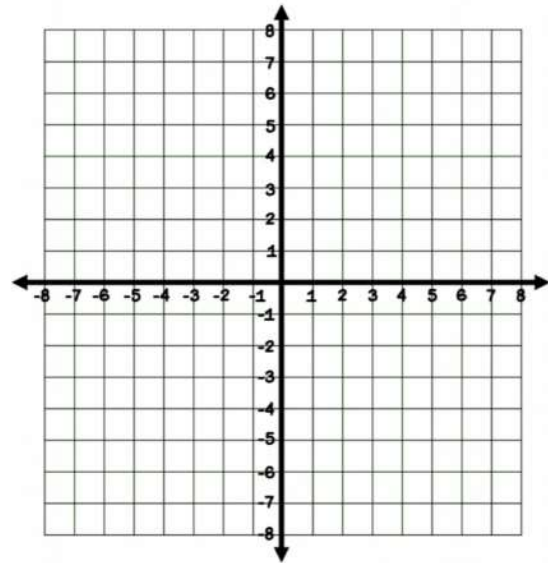
17. Solve $3x^2 - 18x - 48 = 0$ by completing the square.

14. Solve the system below using elimination.

$$\begin{cases} 5x + 9y = -10 \\ 7x + 10y = -1 \end{cases}$$

For 18-19, Graph the function on the coordinate plane provided.

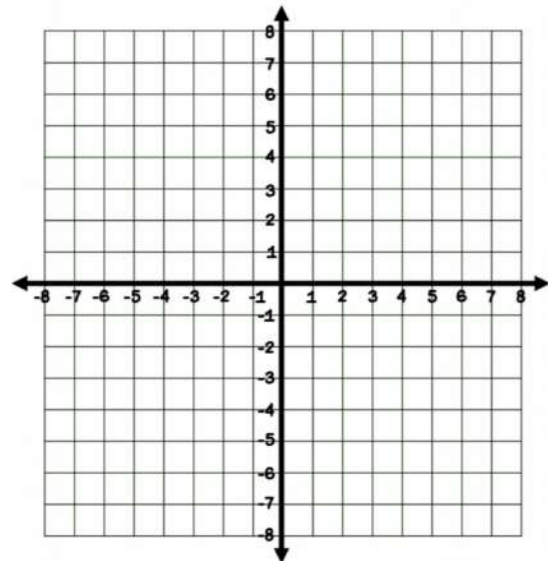
18. $y = \frac{1}{3}x - 2$



15. Solve the system below using substitution.

$$\begin{cases} 2x - 3y = -11 \\ 2x + y = 9 \end{cases}$$

19. $y = 2x^2 + 4x - 3$



16. Solve $3x^2 + 2x + 6 = y$ by using the quadratic formula.