

Algebra 1
Unit 1 – Project
Solving Equations and Inequalities

Instructions: Answer **ALL** questions. You **MUST** attach all graph/sketches and show all calculations and/or explanations to justify your answers. If you are asked to provide a graph, you **MUST** use graph paper or a graphing utility/software. Upload the completed project as a Word or PDF file.

1. Solve the following
 - a. $3(2x - 1) = 21$
 - b. $1.045r + 0.068 = 15.743$
 - c. $\frac{5}{8} = \frac{3}{4}c - \frac{7}{12}$
 - d. $6f - 27 = 3(5f - 2)$
 - e. $|2y - 3| \leq 12$

2. Solve each equation for the given variable in brackets.
 - a. $xy = k$ (y)
 - b. $6(2c + 3d) = 5(4c - 3d)$ (d)

3. Solve each inequality and graph the solution on a **number line**.
 - a. $x + 8 > 11$
 - b. $3x - 8 \geq 4(x - 1.5)$
 - c. $2y - 3 > 5$ or $3y - 1 < 8$
 - d. $3(2y - 5) > 15$ and $4(2y - 1) > 10$