

Advanced Algebra Summer Assignment – Algebra 1 Linear Review

The following worksheets represent your first week of work for Advanced Algebra. It should all be review of topics you learned in Algebra except for the last page which is a little more challenging. If you do not remember how to do some of these problems, watch a video on khanacademy.org (Algebra section) or find a video on youtube on that subject. If you have any questions you may email Laurie at lhailer@tamdistrict.org.

This packet is due on the first day of math class which will be the week of August 26th.

Assignment #1 - Linear Equations

Name: _____

Show your work. Leave all answers as fractions when appropriate.

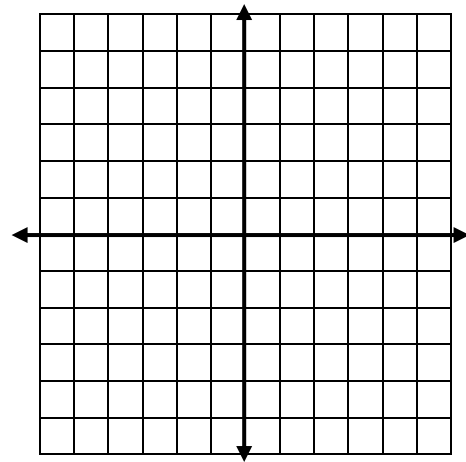
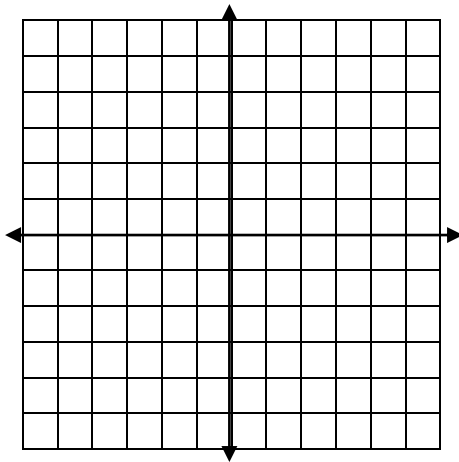
Graph each linear equation. Graph #1 and 2 on the left grid and #3 and 4 on the right grid.

1. $y = \frac{2}{3}x + 4$

2. $y = -\frac{5}{3}x$

3. $y = -3x + 2$

4. $y = \frac{4}{5}x - 3$



Find an equation for the line with the given properties. Use the slope equation $m = \frac{y_2 - y_1}{x_2 - x_1}$ and

either $y = mx + b$ (slope/intercept) or $y - y_1 = m(x - x_1)$ (point/slope). Express your answer in slope/intercept form $y = mx + b$

5. Slope = 4; containing the point (3, -1)	6. Slope = $-\frac{3}{2}$; containing the point (6, -3)
7. Containing the points (-4, -3) and (-5, 2)	8. x-intercept = -3; y-intercept = 4
9. Horizontal; containing the point (3, -2)	10. Vertical; containing the point (4, -5)

<p>11. Parallel to the line $y = -2x + 5$; containing the point $(-1, 7)$</p>	<p>12. Parallel to the line $2x - 3y = -6$; containing the point $(-6, 3)$</p>
<p>13. Perpendicular to the line $y = 2x - 5$; containing the point $(8, -7)$</p>	<p>14. Perpendicular to the line $4x - y = 9$; containing the point $(-6, 1)$</p>

Solve using systems of equations using the given method. Show your answer as a point.

Solve by substitution.

<p>15. $y = 1 - x$ $-2x + y = 4$</p>	<p>16. $x = 2 - 3y$ $-3x + 5y = 50$</p>
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Solve by elimination. Show your answer as a point.

<p>17. $3x + 2y = 4$ $x - 4y = -22$</p>	<p>18. $2x - 5y = 14$ $3x - 4y = 7$</p>
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Assignment #2 - Solving Equations and Inequalities

Name: _____

Solve for x . Show your work and leave all answers in fractions when appropriate.**Hint: To solve equations with fractions, multiply all terms by the least common denominator.**

1. $4(2x-4) - 3(7x+2) = 0$	2. $3(6x-5) = 5(9-4x)$
3. $7(x-4) = x - 4(x+1)$	4. $5x - (2x+9) = 4x - 2$
5. $-\frac{3}{5}x + 12 = 4$	6. $\frac{1}{6}x + \frac{3}{2} = 2$
7. $x - 5 = -\frac{3}{2}x + \frac{5}{2}$	8. $\frac{2}{3}x - 9 = -\frac{1}{2}x + 4$
9. $-2x + 5 > -11$	10. $3(x+1) - 4 > 2(2x+1) - 1$

Solve each literal equation for the indicated variable. Use the same methods that you would use for solving an equation with numbers. (Google **literal equations** or watch a video on **youtube** if you need examples to help with this section)

11. $A = (a+b)h$ for h	12. $A = \frac{1}{2}h(b_1 + b_2)$ for h
13. $ax + b = cx + d$ for d	14. $ax + b = cx + d$ for x
15. $I = P(1 + rt)$ for r	16. $T = T_0 - a(z - z_0)$ for a
17. Challenge $\frac{1}{R} = \frac{1}{r_1} + \frac{1}{r_2}$ for r_2	18. Challenge $y = \frac{u+1}{u+2}$ for u