Name: Answer Key

Date: _____

General and Functional Form

Change the following equations from the general form to the functional form.

1. $4x + 5y - 20 = 0$

$\frac{5y}{5} = \frac{-4x}{5} + \frac{20}{5}$

$y = -\frac{4}{5}x + 4$

2. $-3x - 4y + 7 = 0$

$\frac{-4y}{-4} = \frac{3x}{-4} - \frac{7}{-4}$

$y = -\frac{3}{4}x + \frac{7}{4}$

3. $8x + 12y - 4 = 0$

$\frac{12y}{12} = \frac{-8x}{12} + \frac{4}{12}$

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

4. $x + y + 5 = 0$

$y = -1x - 5$

5. $2x + y + 10 = 0$

$y = -2x + 10$

6. $10x + 20y - 19 = 0$

$\frac{20y}{20} = \frac{-10x}{20} + \frac{19}{20}$

$y = -\frac{1}{2}x + \frac{19}{20}$

7. $9x + 8y - 72 = 0$

$\frac{8y}{8} = \frac{-9x}{8} + \frac{72}{8}$

$y = -\frac{9}{8}x + 9$

8. $5x + 2y + 100 = 0$

$\frac{2y}{2} = \frac{-5x}{2} - \frac{100}{2}$

$y = -\frac{5}{2}x - 50$

9. $x + 5y + 8 = 0$

$\frac{5y}{5} = \frac{-1x}{5} - \frac{8}{5}$

$y = -\frac{1}{5}x - \frac{8}{5}$

10. $7x + 3y - 42 = 0$

$\frac{3y}{3} = \frac{-7x}{3} + \frac{42}{3}$

$y = -\frac{7}{3}x + 14$

11. $13x + 17y + 19 = 0$

$\frac{17y}{17} = \frac{-13x}{17} - \frac{19}{17}$

$y = -\frac{13}{17}x - \frac{19}{17}$

12. $66x + 3y - 9 = 0$

$\frac{3y}{3} = \frac{-66x}{3} + \frac{9}{3}$

$y = -22x + 3$

13. $7x + 5y - 11 = 0$

$\frac{5y}{5} = \frac{-7x}{5} + \frac{11}{5}$

$5y = -\frac{7}{5}x + \frac{11}{5}$

14. $-x + 6y - 14 = 0$

$\frac{6y}{6} = \frac{1x}{6} + \frac{14}{6}$

$y = \frac{1}{6}x + \frac{7}{3}$

15. $14x + 8y + 17 = 0$

$\frac{8y}{8} = \frac{-14x}{8} - \frac{17}{8}$

$y = -\frac{7}{4}x - \frac{17}{8}$

16. $2x + 2y = 0$

$\frac{2y}{2} = \frac{-2x}{2}$

$y = -1x$

Change the following equations from the functional form to the general form.

1. $y = \left(\frac{3}{2}\right)x + 7$

$y = \frac{3x}{2} + 7$

$0 = \frac{3x}{2} - 1y + 7$ $^{(2)}$

$0 = 3x - 2y + 14$

$3x - 2y + 14 = 0$

2. $y = -x + 9$

$1y = -1x + 9$

$1x + 1y - 9 = 0$

$x + y - 9 = 0$

3. $y = \left(\frac{2}{3}\right)x - 9$

$y = \frac{2x}{3} - 9$

$0 = \frac{2x}{3} - 1y - 9$ $^{(3)}$

$2x - 3y - 27 = 0$

4. $y = \left(-\frac{3}{5}\right)x - \left(\frac{5}{3}\right)$

$\frac{3x}{5} + y + \frac{5}{3} = 0$ $^{(15)}$

$\frac{45x}{5} + 15y + \frac{75}{3} = 0$

$9x + 15y + 25 = 0$

5. $y = -3x + \left(\frac{7}{2}\right)$

$3x + 1y$

$3x + 1y - \frac{7}{2} = 0$ $^{(2)}$

$6x + 2y - 7 = 0$

6. $y = x + \left(\frac{9}{4}\right)$

$0 = x - 1y + \frac{9}{4}$ $^{(4)}$

$0 = 4x - 4y + 9$

$4x - 4y + 9 = 0$

7. $y = -5x + \left(\frac{8}{3}\right)$

$5x + 1y - \frac{8}{3}$ $^{(3)}$

$15x + 3y - 8 = 0$

8. $y = 34x + \left(\frac{17}{2}\right)$

$0 = 34x - 1y + \frac{17}{2}$ $^{(2)}$

$0 = 68x - 2y + 17$

9. $y = 14x - \left(\frac{8}{3}\right)$

$0 = 14x - 1y - \frac{8}{3}$ $^{(3)}$

$42x - 3y - 8 = 0$

10. $y = -4x + 22$

$4x + 1y - 22 = 0$

11. $y = x$

$1x - 1y = 0$

12. $y = \left(\frac{1}{2}\right)x + \left(\frac{2}{3}\right)$

$0 = \frac{1x}{2} - 1y + \frac{2}{3}$ $^{(6)}$

$0 = \frac{6x}{2} - 6y + \frac{12}{3}$

$3x - 6y + 4 = 0$

13. $y = 16$

$1y - 16 = 0$

14. $y = \left(-\frac{1}{4}\right)x - (16)$

$\frac{1x}{4} + 1y + 16 = 0$ $^{(4)}$

$1x + 4y + 64 = 0$

15. $y = 9x + 81$

$9x - 1y + 81 = 0$

16. $y = 0$

$y = 0$