

Name: KEY

**Section 3.1a – Proficiency Check – Standard and General Form**

Write the following equations in General Form  $Ax + By + C = 0$

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| $y - 4 = \frac{1}{2}(x + 6)$ $(y - 4 = \frac{1}{2}x + 3) \times 2$ $2y - 8 = x + 6$ $-2y + 8 \quad -2y + 8$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math>x - 2y + 14 = 0</math> </div> | $(y = -\frac{2}{3}x - 5) \times 3$ $3y = -2x - 15$ $+2x + 15 \quad +2x + 15$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math>2x + 3y + 15 = 0</math> </div> | $y + 3 = \frac{2}{5}(x - 4)$ $(y + 3 = \frac{2}{5}x - \frac{8}{5}) \times 5$ $5y + 15 = 2x - 8$ $-5y - 15 \quad -5y - 15$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math>0 = 2x - 5y - 23</math> </div> |
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Given the following information, write the equation of the line in Standard Form  $Ax + By = C$

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| <p>Goes through: (0, 3)<br/>Slope of: 3</p> <p style="text-align: center;">↑<br/>y-int</p> $y = 3x + 3$ $-y \quad -y$ $0 = 3x - y + 3$ $-3 \quad -3$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math>3x - y = -3</math> </div> | <p>Goes through: (2, -5)<br/>Slope of: <math>-\frac{4}{7}</math></p> $y - (-5) = -\frac{4}{7}(x - 2)$ $(y + 5 = -\frac{4}{7}x + \frac{8}{7}) \times 7$ $7y + 35 = -4x + 8$ $+4x \quad -35 \quad +4x \quad -35$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math>4x + 7y = -27</math> </div> | <p>Goes through points:<br/>(4, -3) and (-3, 7)</p> $m = \frac{7 - (-3)}{-3 - 4} = \frac{10}{-7}$ $y - 7 = -\frac{10}{7}(x + 3)$ $(y - 7 = -\frac{10}{7}x - \frac{30}{7}) \times 7$ $7y - 49 = -10x - 30$ $+10x \quad +49 \quad +10x \quad +49$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math>10x + 7y = 19</math> </div> |
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