



# **Drawing straight-line from given equation**

Mana Maths

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# Te reo Māori terms



**rārangi torotika**

straight line

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**whārite**

equation

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**haukotinga y**

y-intercept

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**whakakapi**

substitution

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# Drawing straight-line from given equation — Foundation

Plot a few points, then draw the full line.

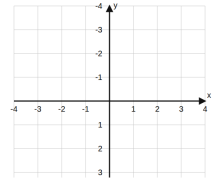
1. Draw  $y = x + 1$ .



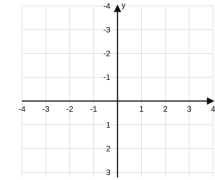
2. Draw  $y = x - 2$ .



3. Draw  $y = 2x$ .



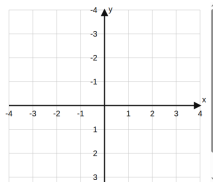
4. Draw  $y = 2x + 1$ .



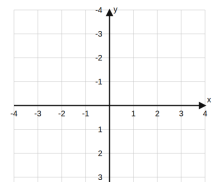
5. Draw  $y = -x + 3$ .



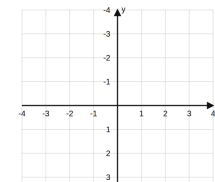
6. Draw  $y = -x - 1$ .



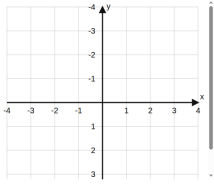
7. Draw  $y = 3x - 2$ .



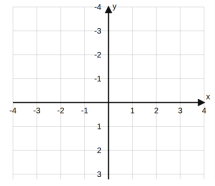
8. Draw  $y = -2x + 2$ .



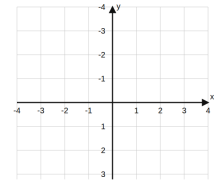
9. Draw  $y = \frac{1}{2}x + 1$ .



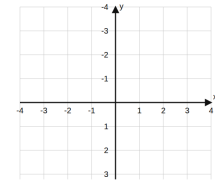
10. Draw  $y = \frac{1}{2}x - 2$ .



11. Draw  $y = -\frac{1}{2}x + 2$ .



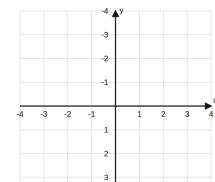
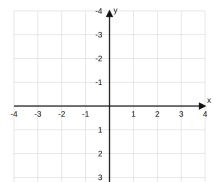
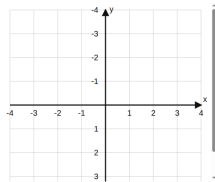
12. Draw  $y = -\frac{1}{2}x - 1$ .



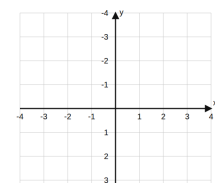
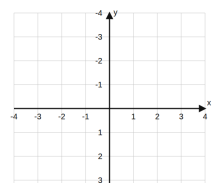
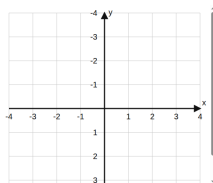
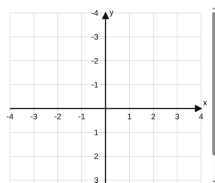
# Drawing straight-line from given equation — Proficient

Use a quick table or the gradient and  $y$ -intercept.

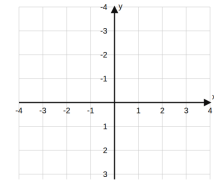
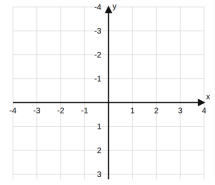
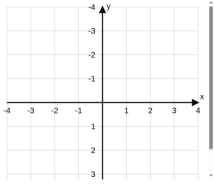
1. Draw  $y = 3x + 1$ .    2. Draw  $y = -3x + 2$ .    3. Draw  $y = \frac{3}{2}x - 1$ .    4. Draw  $y = -\frac{3}{2}x + 3$ .



5. Draw  $y = 4 - x$ .    6. Draw  $y = 2 - 2x$ .    7. Draw  $2y = x + 4$ .    8. Draw  $2y = -x + 2$ .



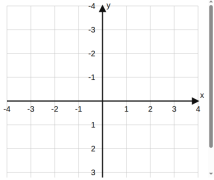
9. Draw  $3y = 2x - 3$ . 10. Draw  $3y = -2x + 6$ . 11. Draw  $y - 1 = 2x$ . 12. Draw  $y + 2 = -x$ .



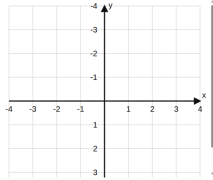
# Drawing straight-line from given equation — Excellence

Rearrange to the form  $y = mx + c$  when needed, then draw the line carefully.

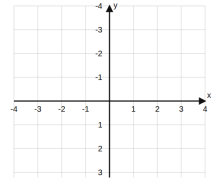
1. Draw  $x + y = 2$ .



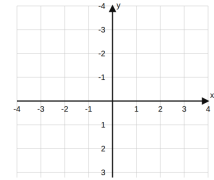
2. Draw  $2x + y = -1$ .



3. Draw  $2y - 3x = 4$ .



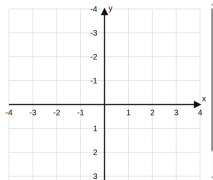
4. Draw  $3y + 2x = 6$ .



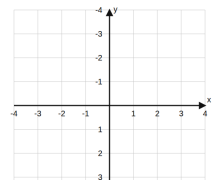
5. Draw  $4y = 2x - 8$ .



6. Draw  $4y = -2x + 47$ .



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



8. Draw  $y = -\frac{5}{2}x + 4$ .



9. Draw  $y - 3 = \frac{3}{2}(x - 1)$ . Draw  $y + 1 = -\frac{3}{2}(x + 1)$ . Draw  $2(y - 1) = x + 2$ . Draw  $2(y + 2) = -x + 1$ .

