



Finding x- and y-intercepts

Mana Maths

Te reo Māori terms



haukotinga x

x-intercept

Open in Te Aka

haukotinga y

y-intercept

Open in Te Aka

haukotinga

intercept

Open in Te Aka

koi

point

Open in Te Aka

Finding x - and y -intercepts — Foundation

Use $x = 0$ for the y -intercept and $y = 0$ for the x -intercept.

1. For $y = x + 4$, find the y -intercept.

2. For $y = x - 3$, find the y -intercept.

3. For $y = 2x + 5$, find the y -intercept.

4. For $y = 4x - 7$, find the y -intercept.

5. For $y = -x + 6$, find the y -intercept.

6. For $y = -3x - 2$, find the y -intercept.

7. For $y = x + 4$, find the x -intercept.

8. For $y = x - 3$, find the x -intercept.

9. For $y = 2x + 8$, find the x -intercept.

10. For $y = 3x - 9$, find the x -intercept.

11. For $y = -x + 6$, find the x -intercept.

12. For $y = -2x - 10$, find the x -intercept.

13. Line through $(0, 5)$ and $(2, 7)$. What is the y -intercept?

14. Line through $(-4, 0)$ and $(0, 6)$. Write both intercepts.

Finding x- and y-intercepts — Proficient

Give intercepts as coordinates.

1. Find both intercepts of $y = 2x + 6$.

2. Find both intercepts of $y = 3x - 12$.

3. Find both intercepts of $y = -x + 8$.

4. Find both intercepts of $y = -4x - 4$.

5. Find both intercepts of $y = \frac{1}{2}x + 3$.

6. Find both intercepts of $y = -\frac{3}{2}x + 6$.

7. Intercepts $(0, -5)$ and $(10, 0)$. Write the equation.

8. Intercepts $(0, 4)$ and $(-2, 0)$. Write the equation.

9. Through $(0, 7)$ and $(7, 0)$. Write intercepts and equation.

10. Through $(0, -3)$ and $(6, 0)$. Write intercepts and equation.

11. For $2x + y = 10$, find both intercepts.

12. For $3x - 2y = 12$, find both intercepts.

13. For $x + 4y = 8$, find both intercepts.

14. For $5x + y = -15$, find both intercepts.

15. For $y = \frac{3}{4}x - 9$, find both intercepts.

Finding x- and y-intercepts — Excellence

Work with equations, forms, and conditions.

1. Find both intercepts of $y = -\frac{2}{3}x + 4$.

2. Find both intercepts of $y = \frac{5}{2}x - 10$.

3. Find both intercepts of $4x + 5y = 20$.

4. Find both intercepts of $3x - 4y = 24$.

5. Which line has x-intercept 4: $y = 2x - 8$ or $y = -2x + 8$?

6. Which line has y-intercept -6 : $y = 3x - 6$ or $y = -6x$?

7. Intercepts $(0, 9)$ and $(3, 0)$. Write the equation.

8. Intercepts $(0, -8)$ and $(-4, 0)$. Write the equation.

9. Find k if $y = 2x + k$ has x-intercept -3 .

10. Find k if $y = -4x + k$ has y-intercept $(0, 11)$.

11. Through $(0, 5)$ and x-intercept $(2, 0)$. Write the equation.

12. Through $(0, -7)$ and x-intercept $(-1, 0)$. Write the equation.

13. True or false: every non-horizontal line has one x- and one y-intercept.

14. Can $y = 6$ have an x-intercept? Briefly explain.

15. Can $x = -3$ have a y-intercept? Briefly explain.

16. Larger x-intercept: $y = -x + 4$ or $y = 2x - 4$?