



Solving inequalities

Mana Maths

Te reo Māori terms



taurangi

variable

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kīanga

expression

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whakaoti

solve

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uara

number value

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Foundation: Solving inequalities

1. Solve: $x + 3 > 7$ 2. Solve: $2x < 10$ 3. Solve: $y - 4 \leq 6$ 4. Solve: $3p \geq 12$

5. Solve: $\frac{a}{2} > 5$ 6. Solve: $b + 7 \leq 15$ 7. Solve: $4c < 20$ 8. Solve: $d - 2 \geq 8$

9. Solve: $5e > 25$ 10. Solve: $\frac{f}{3} \leq 4$ 11. Solve: $g + 5 > 12$ 12. Solve: $6h \leq 30$

- 13.** Solve: $k - 3 < 9$ **14.** Solve: $7m \geq 21$ **15.** Solve: $\frac{n}{4} > 3$ **16.** Solve: $p + 8 \leq 20$

Proficient: Solving inequalities

1. Solve: $2x + 5 > 13$ 2. Solve: $3y - 4 \leq 11$ 3. Solve: $\frac{p}{2} + 3 \geq 7$ 4. Solve: $4a - 7 < 17$

5. Solve: $5b + 2 > 22$ 6. Solve: $\frac{c}{3} - 1 \leq 4$ 7. Solve: $6d - 5 \geq 19$ 8. Solve: $2e + 8 < 20$

9. Solve: $3f - 6 > 12$ 10. Solve: $\frac{g}{4} + 2 \geq 5$ 11. Solve: $7h - 3 \leq 25$ 12. Solve: $5k + 4 > 29$

13. Solve: Solve:
 $4x - 6 < 18$

14. Solve: Solve
for p : $\frac{p}{2} + 5 > 12$

15. Solve: Solve
for a : $10 - 2a < 2$

16. Solve: $3(m - 2) \geq 1$

Excellence: Solving inequalities

1. Solve: $5 - 3x > 14$

2. Solve: $8 - 2y \leq 2$

3. Solve: $3(2a - 4) \geq 24$

4. Solve: $\frac{2b + 6}{3} < 10$

5. Solve: $4(c - 3) + 2c > 30$

6. Solve: $\frac{5d - 10}{2} \leq 15$

7. Solve: $2(e + 4) - 3e < 5$

8. Solve: $\frac{3f + 9}{4} \geq 6$

9. Solve: $5 - 2(g + 1) > 1$

10. Solve: $\frac{4h - 8}{2} \leq 10$

11. Solve: $3(2k - 5) + k \geq 20$

12. Solve: $\frac{5m + 15}{3} < 25$

- 13.** Solve: A taxi ride costs a \$5 fee plus \$2 per kilometre, k . If you have a maximum budget of \$25, write an inequation and solve it to find the maximum distance you can travel.
- 14.** Solve: You need at least 80 marks to pass a test. Each correct answer is worth 4 marks. If you answered x questions correctly, write an inequation and solve it to find the minimum number of correct answers needed.
- 15.** Solve: A rectangle has length $2x + 3$ and width x . If the perimeter is at most 36 cm, write an inequation and solve it to find the possible values of x .
- 16.** Solve: The sum of three consecutive integers is less than 60. If the smallest integer is n , write an inequation and solve it to find the possible values of n .

17. Solve: A phone plan costs \$20 per month plus \$0.10 per minute of calls. If you want to spend at most \$50 per month, write an inequation and solve it to find the maximum minutes you can use.

18. Solve: You are saving for a \$120 bike. You already have \$45 and can save \$15 per week. Write an inequation and solve it to find how many weeks you need to save.

19. Solve: A number is multiplied by 4, then 7 is subtracted. The result is greater than 25. Write an inequation and solve it to find the possible numbers.

20. Solve: Half of a number plus 8 is at most 20. Write an inequation and solve it to find the possible numbers.