

Gradient, Intercept and Straight-Line Graphs ($y = mx + c$)

Year 9 · Algebra · y9-alg-solve-linear

Name: _____

Date: _____

Class: _____

Score: ____ / ____

Instructions

Answer every question in Practice. Try the Challenge section once Practice is complete. 10 questions in total.

Practice

1. A line has equation $y = 3x + 2$. What is its gradient?

2. A line has equation $y = 3x + 2$. What is its y-intercept?

3. A line passes through (0, 4) and (2, 10). Find its gradient.

4. A line has gradient 5 and passes through (0, -3). Write its equation in the form $y = mx + c$.

5. A line passes through (1, 5) and (3, 9). Find its gradient.

6. Gradient = change in $y \div$ change in x (rise over run). A line passes through (2, 3) and (5, 12). Find its gradient.

7. The y-intercept is where the line crosses the y-axis (where $x = 0$), given by c in $y = mx + c$. A line has equation $y = 4x - 7$. What is its y-intercept?

8. A line has gradient 2 and crosses the y-axis at (0, 5). Write its equation in the form $y = mx + c$.

Challenge

1. A line passes through (-2, 1) and (3, 16). Find its gradient.

2. Line A has equation $y = 3x - 1$. Line B is parallel to line A and passes through (2, 13). Find the equation of line B in the form $y = mx + c$.
