

Solutions

Award method and answer marks as indicated; accept equivalent correct methods.

2.1

- Parallel gradients match: -3 .

2.2

- $y = 4x + 7$, because its gradient is also 4.

2.3

- The point is the intercept: $y = 5x + 2$.

2.4

- $7 = 2 + c$, so $c = 5$ and $y = x + 5$.

3.1

(a)

- $m = -2$.

(b)

- $-1 = -2(4) + c$ gives $c = 7$, so $y = -2x + 7$.

(c)

- Crossing: $(0, 7)$. Substitution gives $y = -8 + 7 = -1$, as required.

3.2

(a)

- Parallel lines have equal gradient, so $m = 3$.
- In $y = 3x + c$, substitute $5 = 3(-2) + c$, giving $c = 11$ and $y = \mathbf{3x + 11}$.

(b)

- Divide N's equation by 2 to obtain $y = 3x - 4$, so N is **the same line** as L.
- An example of a distinct parallel line is $\mathbf{y = 3x + 1}$, with a different intercept.