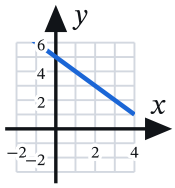
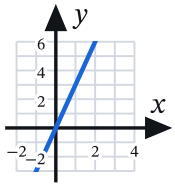
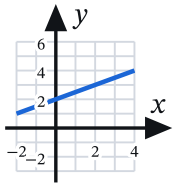
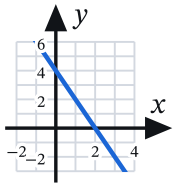
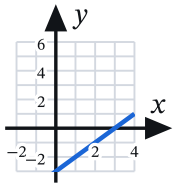
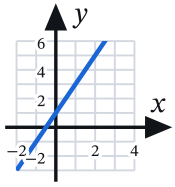
Names (group) _____ Date _____

Linear Functions: Practice and Check

PART 1 Group game: Four Representations

1. Cut out the 24 cards. Each of six functions is shown in four ways: an equation, a graph, a table and a situation.
2. Deal four cards to each player and put the rest in a pile. Take turns asking others for a card you need ("Do you have the graph of $y = 2x + 1$?").
3. When you collect all four cards of one function, lay down the "set" and explain why they belong together. The player with the most sets wins.

$y = 2x + 1$		x: 0, 1, 2 y: 0, 3, 6	A 2 cm plant grows 0.5 cm a day
$y = -x + 5$		x: 0, 1, 2 y: 2, 2.5, 3	A 4 L tank loses 2 L a minute
$y = 3x$		x: 0, 1, 2 y: 4, 2, 0	−3 °C, 1 °C warmer every hour
$y = \frac{1}{2}x + 2$		x: 0, 1, 2 y: −3, −2, −1	Taxi: 1 € to start and 2 € per km
$y = -2x + 4$		x: 0, 1, 2 y: 1, 3, 5	A 5 cm candle, 1 cm less every hour
$y = x - 3$		x: 0, 1, 2 y: 5, 4, 3	Apples: 3 € per kilogram

Name _____ Date _____

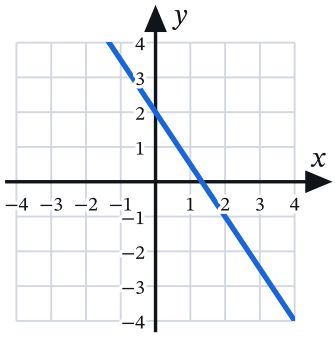
PART 2 Check

1 ON YOUR OWN Is the relationship linear? If it is, find m.

x	0	1	2	3
y	7	4	1	-2

yes / **no** $m =$ ☐

2 ON YOUR OWN Write the equation of the line in the graph.



$y =$ ☐

3 ON YOUR OWN Write the equation of the line parallel to $y = 3x - 1$ through $(0, 2)$, and its x-intercept.

$y =$ ☐ x-intercept $x =$ ☐

4 ON YOUR OWN For $f(x) = 2x - 6$: where is $f(x) > 0$?

☐

5 ON YOUR OWN CHALLENGE Car park A: 10 € plus 2 € per hour; B: 4 € per hour. When is A cheaper?

☐ → ☐

How am I doing?

- ☐ I can confidently move between equations, graphs, tables and situations.
- ☐ I can, but I sometimes need the slope triangle or an app.
- ☐ I need more practice.