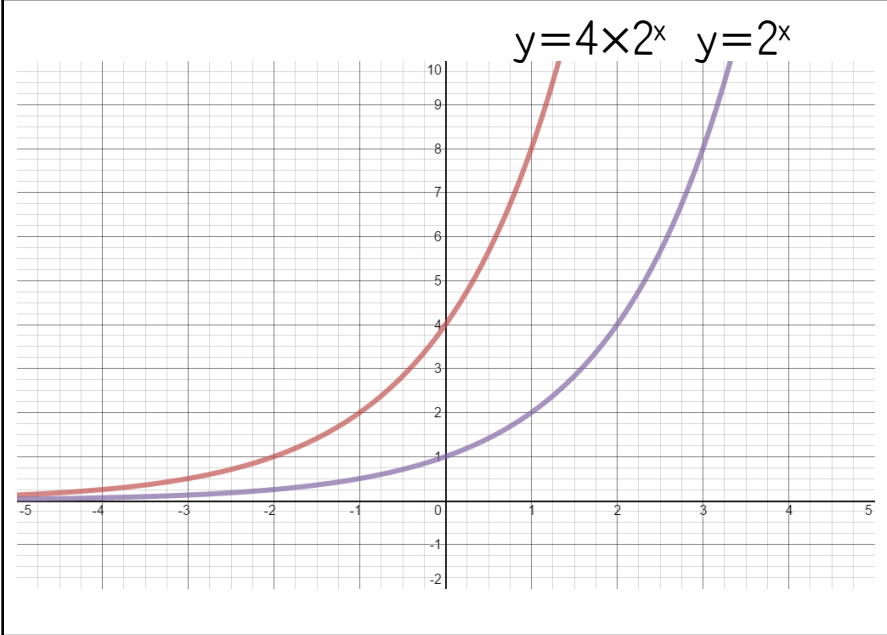
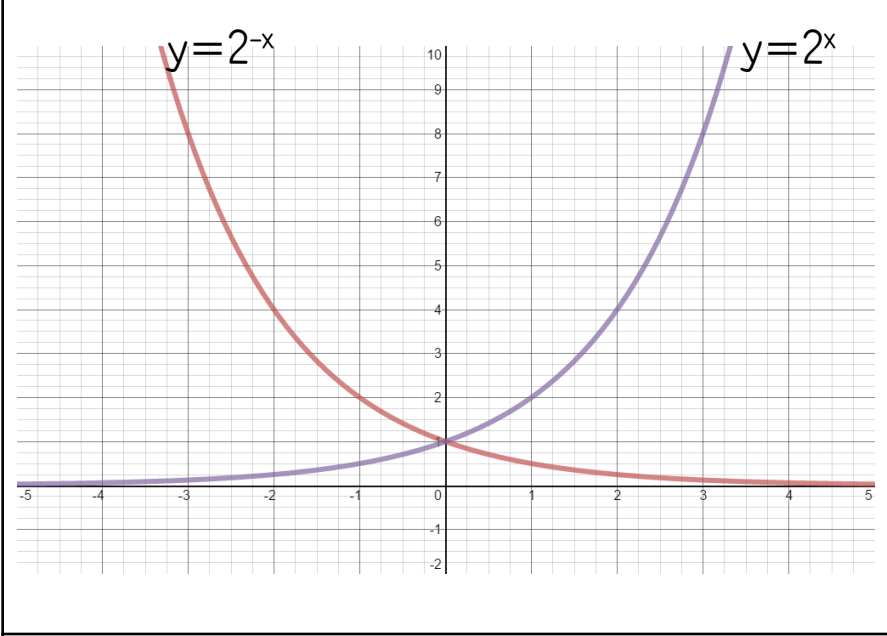
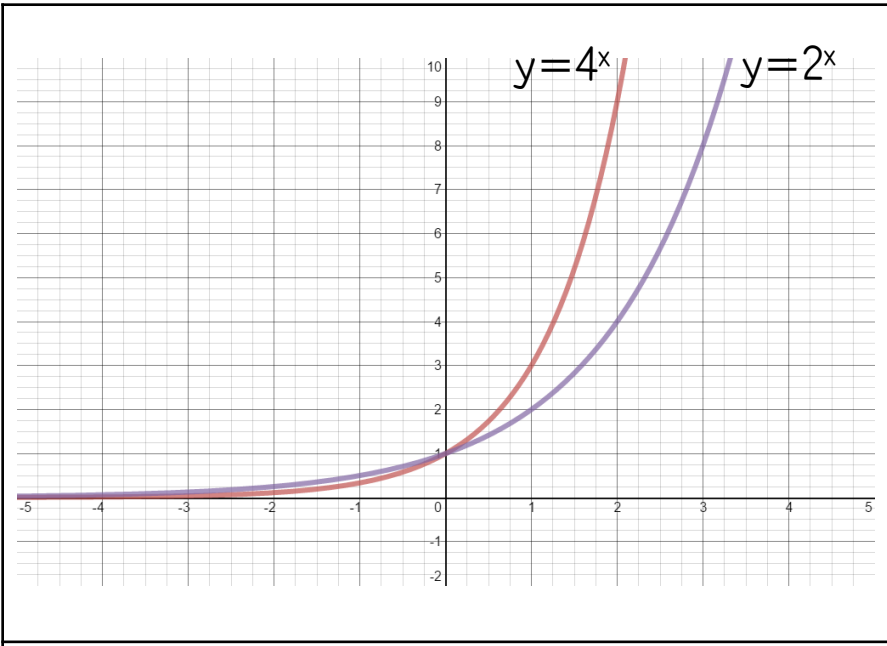


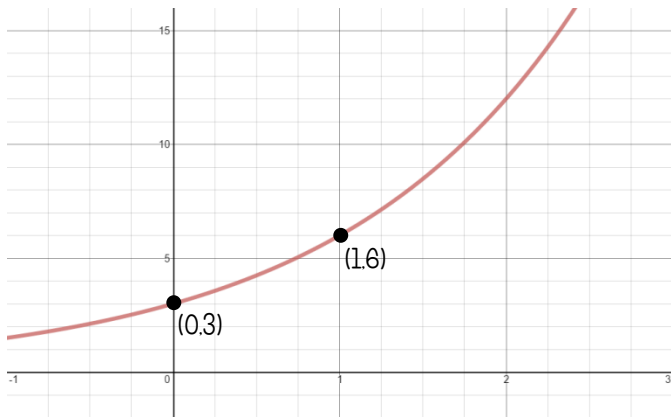
Exploring exponential graph shapes

What is the same / different about each pair of graphs?



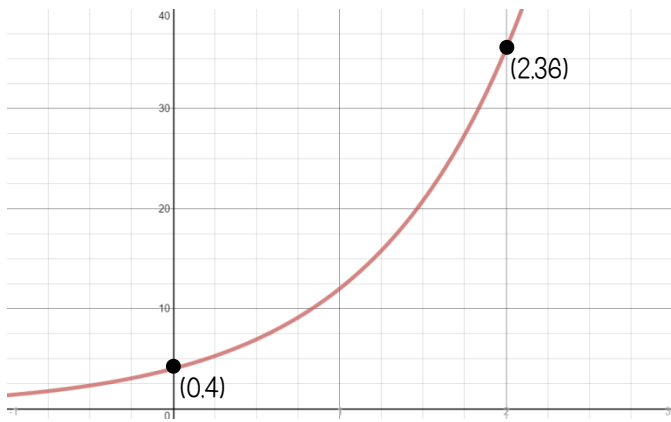
The sketch shows part of the graph of $y = pq^x$.
The points with coordinates $(0, 3)$ and $(1, 6)$ lie on the graph.

- a) Work out the value of p and of q .
- b) Find the value of y when $x = 3$.



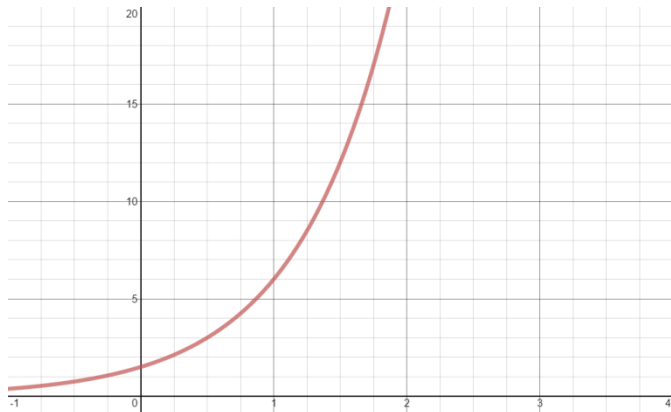
The sketch shows part of the graph of $y = pq^x$.
The points with coordinates $(0, 4)$ and $(2, 36)$ lie on the graph.

- a) Work out the value of p and of q .
- b) Find the value of y when $x = 4$.



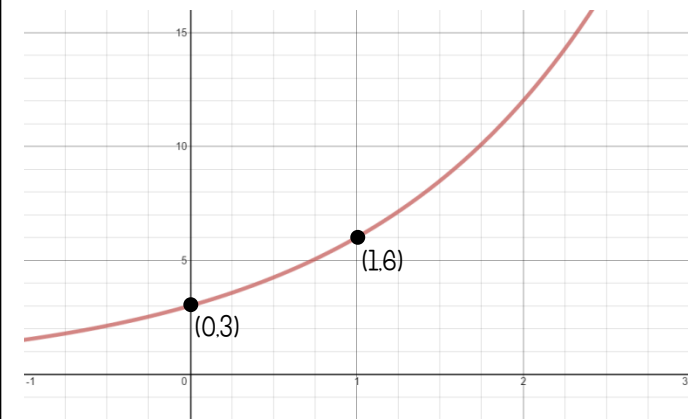
The sketch shows part of the graph of $y = pq^x$.
The points with coordinates $(0, 1.5)$ and $(1, 6)$ lie on the graph.

- a) Work out the value of p and of q .
- b) Find the value of y when $x = 3$.



The sketch shows part of the graph of $y = pq^x$.
The points with coordinates (0, 3) and (1, 6) lie on the graph.

- Work out the value of p and of q .
- Find the value of y when $x = 3$.

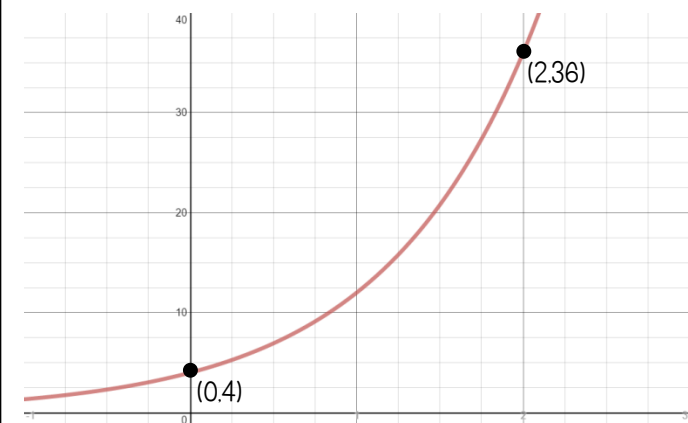


$$p = 3, q = 2$$

$$\text{When } x = 3, y = 24$$

The sketch shows part of the graph of $y = pq^x$.
The points with coordinates (0, 4) and (2, 36) lie on the graph.

- Work out the value of p and of q .
- Find the value of y when $x = 4$.

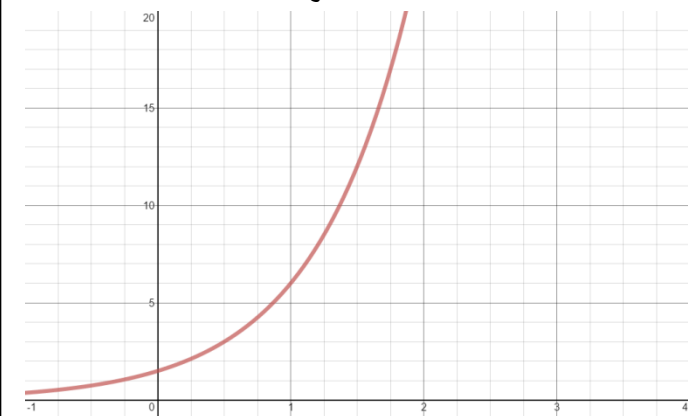


$$p = 4, q = 3$$

$$\text{When } x = 4, y = 324$$

The sketch shows part of the graph of $y = pq^x$.
The points with coordinates (0, 1.5) and (1, 6) lie on the graph.

- Work out the value of p and of q .
- Find the value of y when $x = 3$.



$$p = 1.5, q = 4$$

$$\text{When } x = 3, y = 96$$