Picture the process II

Teacher notes

Why use this resource?

In this task, students relate real life situations to their algebraic models via graphical representations. For some students this will be obvious, others are likely to really struggle. Discussion is a really important way of clarifying their thoughts.

Preparation

There are cards to print and cut out. If appropriate these could be laminated for reuse.

Possible approach

Give students some time to consider just the process cards first, and perhaps ask them to sketch suitable graphs, rather than being presented with all of the cards at once.

The task is probably best done with students in pairs or small groups so they can discuss their thinking as they go.

Key questions

- What are the really important aspects of the process? Is the quantity increasing or decreasing?
- What are the most striking features of the graphs? How can you link these to the equations?
- What modelling assumptions have you made? What would happen if you changed these?

Possible support

Note that one equation involves e, but in the context of this problem, students only need to know that e is a constant. You could suggest that they replace e by 2 or 3.

A similar activity using slightly more straight-forward functions is Picture the process I.