Do Now: Exponential function graphing

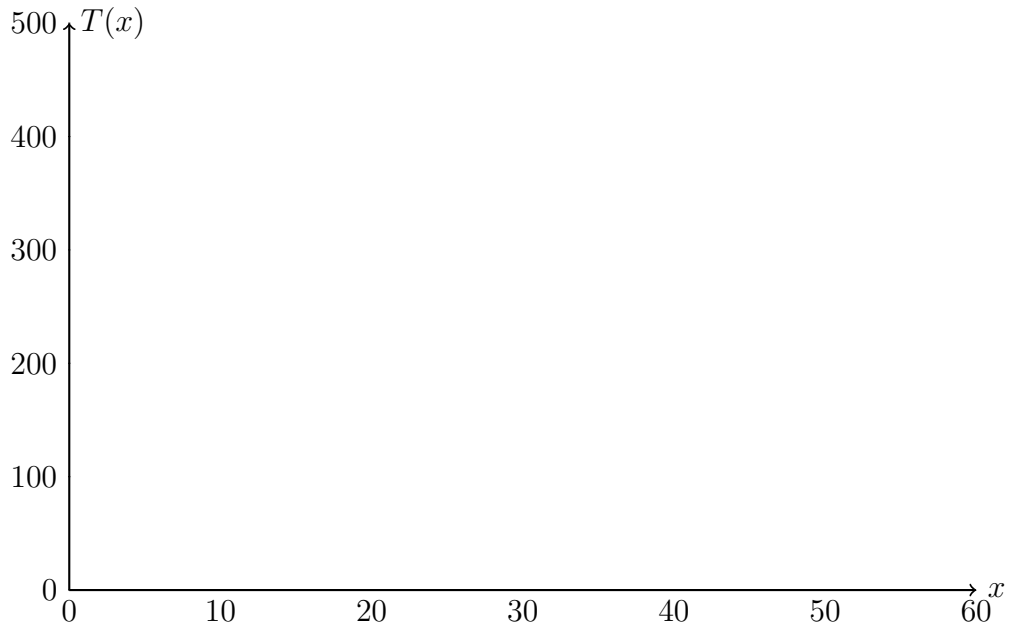
1. The temperature of a hot iron as it cools is modeled by the function $T(x) = 350e^{-0.035x} + 18$ where $T(x)$ is the temperature in degrees Celsius and x is the time in minutes.

   (a) Write down the initial temperature at time zero.

   (b) Find the temperature after 20 minutes.

   (c) When will the temperature of the iron reach 75 degrees Celsius?

   (d) On the graph below, sketch the temperature of the iron, labeling the points above A, B, and C.



Early finishers

Simplify, leaving no negative or fractional exponents.

2. $\frac{4}{3}x^{-3}y \times 3x^2y^2$

3. $\sqrt[3]{a^6b^{-3}}$

4. $log_3 27$

5. $log_6 2 + log_6(2 * 3^2)$

6. Let $f(x) = \sqrt{9x} + 7$ and $g(x) = x^6$
   (a) Find $(f \circ g)(x)$

   (b) Find $g^{-1}(x)$