

**Problem statement** Below are the graphs of three functions  $y = f(x)$ . In just one of the graphs, it is true for all  $x$  that  $\frac{d^3y}{dx^3} > 0$ . Which is the graph? Explain why the other two graphs could not possibly satisfy the condition  $\frac{d^3y}{dx^3} > 0$  for all  $x$ .

