# Tangents

## Gold

The curve $C$ has equation:

$$y = \frac{(x+1)(x-1)^2}{x^2}, \quad x > 0$$

Find an equation of the tangent to $C$ at the point where $x = 2$.

## Silver

The curve $C$ has equation:

$$y = \frac{(2x+3)(x-4)}{2x}, \quad x > 0$$

**a** Find $\frac{dy}{dx}$ in its simplest form.

**b** Find an equation of the tangent to $C$ at the point where $x = 1$.

## Bronze

The curve $C$ has equation:

$$y = 3x^2 - 2x - 7$$

**a** Find $\frac{dy}{dx}$.

**b** Find an equation of the tangent to $C$ at the point (2, 1)