2016 **11 b** Differentiate $\frac{x+2}{3x-4}$. **2**

Using the quotient rule,

Let $u = x + 2$ $\quad \frac{du}{dx} = 1$

Let $v = 3x - 4$ $\quad \frac{dv}{dx} = 3$

$$\frac{d}{dx}\left[\frac{x+2}{3x-4}\right] = \frac{v\frac{du}{dx} - u\frac{dv}{dx}}{v^2}$$

$$= \frac{(3x-4).1 - (x+2).3}{(3x-4)^2}$$

$$= \frac{3x - 4 - 3x - 6}{(3x-4)^2}$$

$$= \frac{-10}{(3x-4)^2}$$

State Mean: **1.80**

* These solutions have been provided by *projectmaths* and are not supplied or endorsed by BOSTES.

BOSTES: Notes from the Marking Centre

This information is released by BOSTES in late Term 1 2017.