

**Exercise 43**

For the following exercises, express each function  $H$  as a composition of two functions  $f$  and  $g$  where  $H(x) = (f \circ g)(x)$ .

$$H(x) = \sqrt{\frac{2x-1}{3x+4}}$$

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**Solution**

Choose

$$f(x) = \sqrt{x} \quad \text{and} \quad g(x) = \frac{2x-1}{3x+4}$$

so that

$$H(x) = (f \circ g)(x) = f(g(x)) = \sqrt{\frac{2x-1}{3x+4}}.$$