

f r q

- Solution to $h(x) = e^{1/2}$

Model Solution

(i)

$$g(x) = 3$$

$$\log_4(2x) = 3$$

$$4^3 = 2x$$

$$x = \frac{4^3}{2} = 32$$

(ii)

$$h(x) = e^{1/2}$$

$$\frac{(e^x)^5}{e^{1/4}} = e^{1/2}$$

$$e^{(5x-1/4)} = e^{1/2}$$

$$5x - \frac{1}{4} = \frac{1}{2}$$

$$5x = \frac{3}{4}$$

$$x = \frac{3}{20}$$

Part B

Select a point value to view scoring criteria, solutions, and/or examples to score the response.



0	1	2
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The student response includes both of these criteria.

- Expression for $j(x)$
- Expression for $k(x)$

Model Solution

$$(i) j(x) = \log_{10}(x+1) - 5\log_{10}(2-x) + \log_{10}3$$

$$j(x) = \log_{10}(x+1) - \log_{10}(2-x)^5 + \log_{10}3$$

$$j(x) = \log_{10}\left(\frac{3(x+1)}{(2-x)^5}\right), -1 < x < 2$$