f r q

$\frac{2\pi}{b} = 4$, so $b = \frac{2\pi}{4} = \frac{\pi}{2}$

$c = 0$

$d = 0$

$h(t) = -\frac{1}{2}\cos\left(\frac{\pi}{2}t\right)$

Note: Based on horizontal shifts and reflections, there are other correct forms for $h(t)$.

Part C

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

✓

0	1	2

The student response includes both of these criteria.

- Correct function behavior in (i)
- Correct change in rate of change in (ii)

Model Solution

(i) Choice c.

(ii) Because the graph of h is concave up on the interval (t_1, t_2), the rate of change of h is increasing on the interval (t_1, t_2).