Use your calculator to approximate each value.

1. $f(2)$ if $f'(x) = e^{-x^2}$ and $f(3) = 1$

2. $f(\pi)$ if $f'(x) = \frac{e^x}{x}$ and $f(1) = -2$

3. $g(3)$ if $g'(x) = \frac{-7}{\ln x}$ and $g(4) = 1$

4. $y(4)$ if $\frac{dy}{dx} = \cos(x^2)$ and $y\left(-\frac{\pi}{2}\right) = 1$

5. $f\left(\frac{1}{2}\right)$ if $f'(x) = \sqrt{1 - x^4}$ and $f\left(\frac{3}{4}\right) = \frac{5}{4}$

6. $y(2)$ if $\frac{dy}{dx} = \sin(x^2)$ and $y(1) = 10$

7. $f\left(\frac{\pi}{6}\right)$ if $f'(x) = \frac{\sin x}{x}$ and $f\left(\frac{\pi}{3}\right) = 2$