

Your Name:

Duration of the Quiz is 25 minutes. There are four problems, worth 20 points. Show all your work for full credit. Books, notes etc. are prohibited. Calculators are NOT permitted.

1. Evaluate the function

$$\sin \left(\cos^{-1} \left(\frac{\sqrt{3}}{2} \right) \right)$$

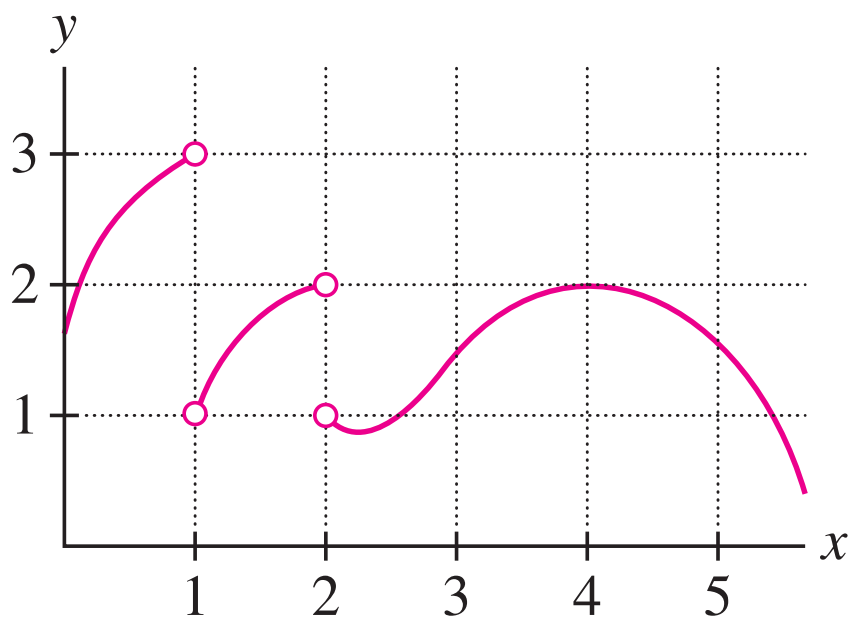
2. Solve the logarithmic equation

$$\ln x + \ln(x - 2) = \ln 4$$

3. Determine the infinite limit.

$$\lim_{x \rightarrow 2^-} \frac{x - 3}{(x - 2)^3}$$

4. For the function f whose graph is shown, state the following.



(a) $\lim_{x \rightarrow 1^-} f(x)$

(b) $\lim_{x \rightarrow 1^+} f(x)$

(c) $\lim_{x \rightarrow 2^-} f(x)$

(d) $\lim_{x \rightarrow 2^+} f(x)$

(e) $\lim_{x \rightarrow 6^+} f(x)$

(f) $\lim_{x \rightarrow 4} f(x)$