

Name \_\_\_\_\_ No Calculators. Present neatly. Score \_\_\_\_\_.  
(5 minutes)

1)

Let  $F(x) = f(g(x))$ , where the graphs of  $f$  and  $g$  are shown in Figure 4. Estimate  $g'(2)$  and  $f'(g(2))$  and compute  $F'(2)$ .

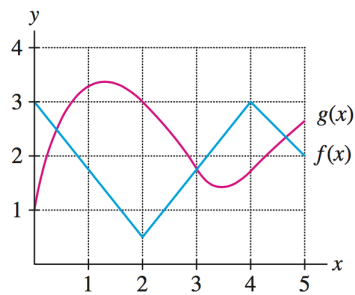


FIGURE 4

Your work:

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(5 minutes)

1)

Compute the second derivative of  $\sin(g(x))$  at  $x = 2$ , assuming that  $g(2) = \frac{\pi}{4}$ ,  $g'(2) = 5$ , and  $g''(2) = 3$ .

Your work: