

**Exercise 76**

For the following exercises, use the functions  $f(x) = 2x^2 + 1$  and  $g(x) = 3x + 5$  to evaluate or find the composite function as indicated.

$$f(g(2))$$

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**Solution**

Evaluate  $g(2)$  first:  $g(2) = 3(2) + 5 = 11$ . Therefore,

$$f(g(2)) = f(11) = 2(11)^2 + 1 = 2(121) + 1 = 243.$$