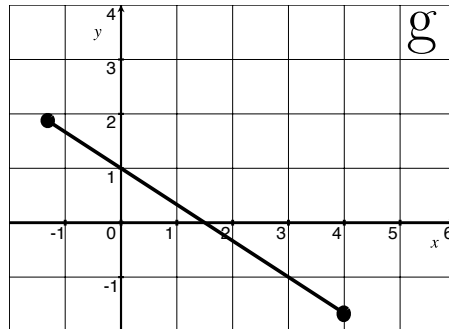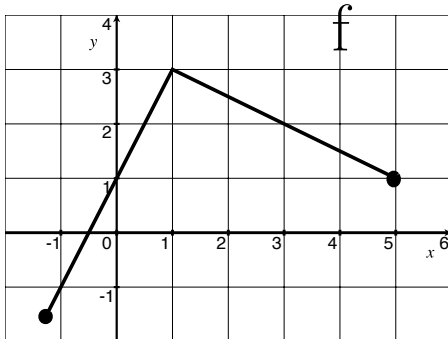# Derivatives of Products & Quotients

1. Let f be the function graphed on the left and g be the function graphed on the right.

   Estimate the following (if possible):

   $(f \cdot g)'(-1)$ $(f \circ g)(3)$

2. Find:

   $$\frac{d}{dx}\left(ex^2\right) \qquad \frac{d}{dx}\left(\frac{e^x}{3x+2}\right) \qquad [(x+3)^{17}(e^x-5)]' \qquad e^{3x^7+4}$$

3. Consider the function $f(x) = \frac{6x}{1+3x^2}$. Find where the function f has a horizontal tangent line.