# Quiz 3

Show *all* your work. No credit is given without reasonable supporting work. There are *two* sides to this quiz.

1. [3] (WebHW6 #13) Divide $\dfrac{18x^2 + 15x - 25}{6x - 5}$

2. [2] (Exponent Wks #2) Simplify $\left(\dfrac{x^5}{2y^{-3}}\right)^{-3}$

3. [5] (§2.3 #38 & §3.2 #62)
   The piecewise defined function $h$
   is graphed on the right and is of
   the form:

   $$h(x) = \begin{cases} p(x) & \text{if } x < 0 \\ \log_b(x) & \text{if } 0 < x \end{cases}$$

   where $p(x)$ is a polynomial that
   when completely factored is of the
   form $(x - c)^m$ and is of degree three.
   Find the (the algebraic rule for the)
   function $h$.