Good Thinking Questions

Workbook page 27#17, page 28#24,26

17. A function is defined by the equation
$f(x) = 2x^3 - ax^2 + bx + 4$. Determine the
values of a and b if $f'(x) = 6x^2 - 4x + 5$.

24. For the function
$f(x) = ax^3 + bx^2 - 5x + 9$, determine the
values of a and b so that $f(-1) = 12$ and
$f'(-1) = 3$.

26. For the function
$f(x) = ax^4 + bx^3 - 4x^2 + 2cx + 14$,
determine the values of a, b, and c so that
$f(-2) = 2, f'(-2) = 16$, and $f''(-2) = -8$.

Answers

17. $a = 2, b = 5$

24. $a = 4$ and $b = 2$

26. $a = \frac{1}{4}, b = 1, c = -2$