

PPP

1) Estimate ~~the area~~ $\int_3^9 (x-3)^2 dx$ using 6 rectangles and right-hand sums. Over or under estimate?

2) Acceleration due to gravity in Sarah's world is -10 ft/sec^2 . A copy of Mean Girls is thrown upward with a velocity of 60 ft/sec from a height of 140 ft .

A) $v(t) = ?$, $h(t) = ?$

B) How high does the movie go?

C) With what velocity does it hit the ground?

3) A) $\int (8+x)(7-3x) dx$

B) $\int \frac{6}{\sqrt[3]{x^3}} dx$

C) $\int_{-2}^3 (5x^2 + 7x - 8) dx$

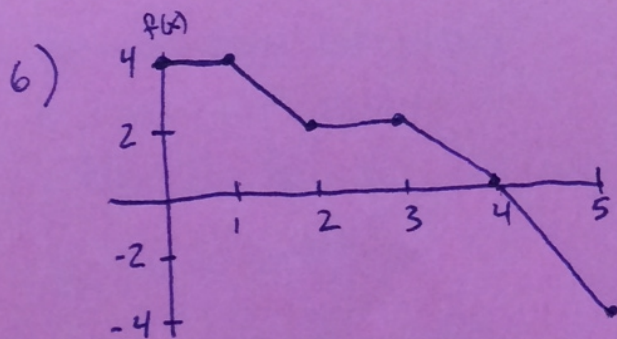
D) $\int \frac{5x^5 - 8x^4 + 3x^2}{2x^2} dx$

E) $\int (6e^x - \frac{10}{x} + 5\cos x) dx$

F) $\int_2^3 \frac{8}{x^6} dx$

4) A) $f'(x) = \frac{8}{x} + 3$, $f(1) = -3$

B) $f'(x) = 6x + 7x^2$, $f(-1) = 5$



5) Find avg. value of function $f(x) = x^2 + 7x$ on $[-1, 5]$

A) $\int_0^3 f(x) dx$

B) $\int_3^5 f(x) dx$

C) $\int_0^5 f(x) dx$

D) Find avg value on $[0, 5]$.