Integrals — Definite

Name: _____ Date: _____

Find the antiderivative, then take its value at the bottom from the top.

1. $\int_{-1}^{0} (-4x + 2)\,dx$

   $= [-2x^2 + 2x]_{-1}^{0}$
   $= 0 - (-2(-1)^2 + 2(-1))$
   $= 0 - (-4)$
   $= 4$

2. $\int_{1}^{2} (-2x)\,dx$

3. $\int_{0}^{2} (2x + 1)\,dx$

4. $\int_{-1}^{2} (4x - 1)\,dx$

5. $\int_{-2}^{-1} (-4x + 1)\,dx$

6. $\int_{0}^{1} (-2x + 1)\,dx$

Integrals · Definite — Answer key

1. ∫ from −1 to 0 of (−4x + 2) dx = 4

2. ∫ from 1 to 2 of (−2x) dx = −3

3. ∫ from 0 to 2 of (2x + 1) dx = 6

4. ∫ from −1 to 2 of (4x − 1) dx = 3

5. ∫ from −2 to −1 of (−4x + 1) dx = 7

6. ∫ from 0 to 1 of (−2x + 1) dx = 0