# Find the antiderivative: $\int(2x)\,dx$



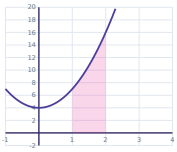
# Find the antiderivative: $\int(4x^3)\,dx$



Evaluate the definite integral $\int$ from 0 to 1 of $(6x)\,dx$.



Find the area of the shaded region under $y = 3x^2 + 4$ from $x = 1$ to $x = 2$.

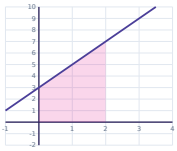




# Find the antiderivative: $\int(9x^2)\,dx$

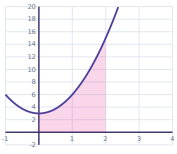


Find the area of the shaded region under $y = 2x + 3$ from $x = 0$ to $x = 2$.





Find the area of the shaded region under $y = 3x^2 + 3$ from $x = 0$ to $x = 2$.





Evaluate the definite integral $\int$ from 1 to 4 of $(2x)\,dx$.

Antiderivatives & Definite Integrals · 2

**ANSWER**

$x^4 + C$

Antiderivatives & Definite Integrals · 1

**ANSWER**

$x^2 + C$

Antiderivatives & Definite Integrals · 4

**ANSWER**

**11**

Antiderivatives & Definite Integrals · 3

**ANSWER**

**3**

Antiderivatives & Definite Integrals · 6

**ANSWER**

**10**

Antiderivatives & Definite Integrals · 5

**ANSWER**

$3x^3 + C$

Antiderivatives & Definite Integrals · 8

**ANSWER**

**15**

Antiderivatives & Definite Integrals · 7

**ANSWER**

**14**

Find the antiderivative:

$\int(6x^2 + 4x)\,dx$



Find the antiderivative:

$\int(9x^2 + 2x)\,dx$



Evaluate the definite integral $\int$ from 2 to 5 of $(9x^2 + 2x)\,dx$.



Find the antiderivative:

$\int(6x^2 + 1)\,dx$



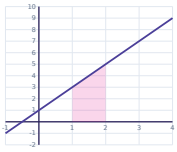
Evaluate the definite integral $\int$ from 2 to 3 of $(6x^2 + 1)\,dx$.



Evaluate the definite integral $\int$ from 2 to 5 of $(3x^2 + 1)\,dx$.



Find the area of the shaded region under $y = 2x + 1$ from $x = 1$ to $x = 2$.





Find the antiderivative:

$\int(8x^3 + 2)\,dx$

Antiderivatives & Definite Integrals · 10

**ANSWER**

$3x^3 + x^2 + C$

Antiderivatives & Definite Integrals · 9

**ANSWER**

$2x^3 + 2x^2 + C$

Antiderivatives & Definite Integrals · 12

**ANSWER**

$2x^3 + x + C$

Antiderivatives & Definite Integrals · 11

**ANSWER**

372

Antiderivatives & Definite Integrals · 14

**ANSWER**

120

Antiderivatives & Definite Integrals · 13

**ANSWER**

39

Antiderivatives & Definite Integrals · 16

**ANSWER**

$2x^4 + 2x + C$

Antiderivatives & Definite Integrals · 15

**ANSWER**

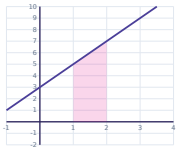
4

Antiderivatives & Definite Integrals · 17

Evaluate the definite integral ∫ from 1 to 3 of $(4x^3 - 3x^2)\,dx$.

Antiderivatives & Definite Integrals · 18

Find the area of the shaded region under $y = 2x + 3$ from $x = 1$ to $x = 2$.

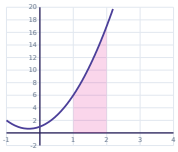


Antiderivatives & Definite Integrals · 19

Evaluate the definite integral ∫ from 2 to 4 of $(12x^3 + 6x^2)\,dx$.

Antiderivatives & Definite Integrals · 20

Find the area of the shaded region under $y = 3x^2 + 2x + 1$ from $x = 1$ to $x = 2$.



Antiderivatives & Definite Integrals · 21

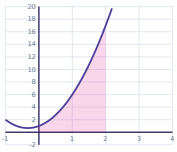
Find the antiderivative: $\int(-8x^3 + 1)\,dx$

Antiderivatives & Definite Integrals · 22

Find the antiderivative: $\int(4x^3 + 6x)\,dx$

Antiderivatives & Definite Integrals · 23

Find the area of the shaded region under $y = 3x^2 + 2x + 1$ from $x = 0$ to $x = 2$.



Antiderivatives & Definite Integrals · 24

Find the antiderivative: $\int(8x^3)\,dx$

Antiderivatives & Definite Integrals · 18

**ANSWER**

**6**

Antiderivatives & Definite Integrals · 17

**ANSWER**

**54**

Antiderivatives & Definite Integrals · 20

**ANSWER**

**11**

Antiderivatives & Definite Integrals · 19

**ANSWER**

**832**

Antiderivatives & Definite Integrals · 22

**ANSWER**

$x^4 + 3x^2 + C$

Antiderivatives & Definite Integrals · 21

**ANSWER**

$-2x^4 + x + C$

Antiderivatives & Definite Integrals · 24

**ANSWER**

$2x^4 + C$

Antiderivatives & Definite Integrals · 23

**ANSWER**

**14**