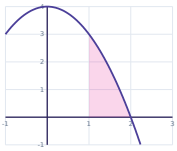
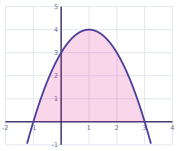
Area Under & Between Curves with Integrals · 1

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



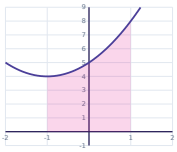
Area Under & Between Curves with Integrals · 2

Find the area of the region enclosed by $y = -x^2 + 2x + 3$ and the x-axis.



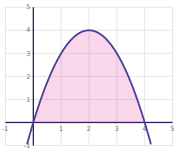
Area Under & Between Curves with Integrals · 3

Find the area of the shaded region under $y = x^2 + 2x + 5$ from $x = -1$ to $x = 1$.



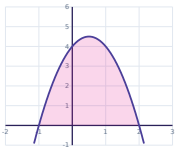
Area Under & Between Curves with Integrals · 4

Find the area of the region enclosed by $y = -x^2 + 4x$ and the x-axis.



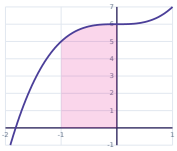
Area Under & Between Curves with Integrals · 5

Find the area of the region enclosed by $y = -2x^2 + 2x + 4$ and the x-axis.



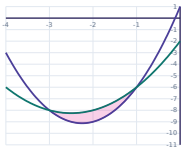
Area Under & Between Curves with Integrals · 6

Find the area of the shaded region under $y = x^3 + 6$ from $x = -1$ to $x = 0$.



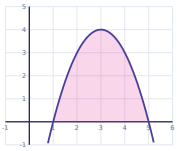
Area Under & Between Curves with Integrals · 7

Find the area of the region enclosed by $y = 2x^2 + 9x + 1$ and $y = x^2 + 5x - 2$.



Area Under & Between Curves with Integrals · 8

Find the area of the region enclosed by $y = -x^2 + 6x - 5$ and the x-axis.



Area Under & Between Curves with Integrals · 2

ANSWER

$$\frac{32}{3}$$

Area Under & Between Curves with Integrals · 1

ANSWER

$$\frac{5}{3}$$

Area Under & Between Curves with Integrals · 4

ANSWER

$$\frac{32}{3}$$

Area Under & Between Curves with Integrals · 3

ANSWER

$$\frac{32}{3}$$

Area Under & Between Curves with Integrals · 6

ANSWER

$$\frac{23}{4}$$

Area Under & Between Curves with Integrals · 5

ANSWER

$$9$$

Area Under & Between Curves with Integrals · 8

ANSWER

$$\frac{32}{3}$$

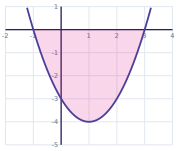
Area Under & Between Curves with Integrals · 7

ANSWER

$$\frac{4}{3}$$

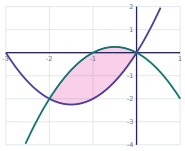
Area Under & Between Curves with Integrals · 9

Find the area of the region enclosed by $y = x^2 - 2x - 3$ and the x-axis.



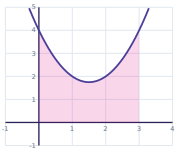
Area Under & Between Curves with Integrals · 10

Find the area of the region enclosed by $y = x^2 + 3x$ and $y = -x^2 - x$.



Area Under & Between Curves with Integrals · 11

Find the area of the shaded region under $y = x^2 - 3x + 4$ from $x = 0$ to $x = 3$.



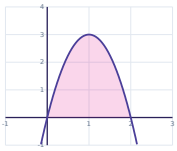
Area Under & Between Curves with Integrals · 12

Find the area of the region enclosed by $y = 2x^2 + 7x$ and $y = x^2 + 3x - 3$.



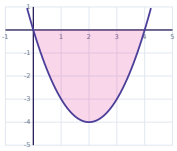
Area Under & Between Curves with Integrals · 13

Find the area of the region enclosed by $y = -3x^2 + 6x$ and the x-axis.



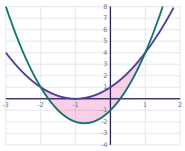
Area Under & Between Curves with Integrals · 14

Find the area of the region enclosed by $y = x^2 - 4x$ and the x-axis.



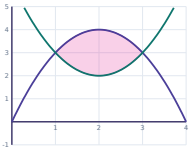
Area Under & Between Curves with Integrals · 15

Find the area of the region enclosed by $y = x^2 + 2x + 1$ and $y = 2x^2 + 3x - 1$.



Area Under & Between Curves with Integrals · 16

Find the area of the region enclosed by $y = -x^2 + 4x$ and $y = x^2 - 4x + 6$.



Area Under & Between Curves with Integrals · 10

ANSWER

$$\frac{8}{3}$$

Area Under & Between Curves with Integrals · 9

ANSWER

$$\frac{32}{3}$$

Area Under & Between Curves with Integrals · 12

ANSWER

$$\frac{4}{3}$$

Area Under & Between Curves with Integrals · 11

ANSWER

$$\frac{15}{2}$$

Area Under & Between Curves with Integrals · 14

ANSWER

$$\frac{32}{3}$$

Area Under & Between Curves with Integrals · 13

ANSWER

$$4$$

Area Under & Between Curves with Integrals · 16

ANSWER

$$\frac{8}{3}$$

Area Under & Between Curves with Integrals · 15

ANSWER

$$\frac{9}{2}$$

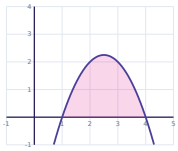
Area Under & Between Curves with Integrals · 17

Find the area of the shaded region under $y = x^2 + 4x + 6$ from $x = -1$ to $x = 2$.



Area Under & Between Curves with Integrals · 18

Find the area of the region enclosed by $y = -x^2 + 5x - 4$ and the x-axis.



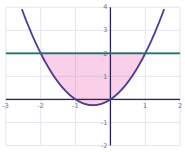
Area Under & Between Curves with Integrals · 19

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



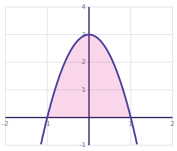
Area Under & Between Curves with Integrals · 20

Find the area of the region enclosed by the parabola $y = x^2 + x$ and the line $y = 2$.



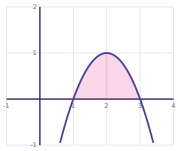
Area Under & Between Curves with Integrals · 21

Find the area of the region enclosed by $y = -3x^2 + 3$ and the x-axis.



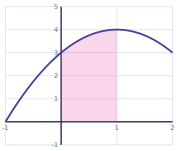
Area Under & Between Curves with Integrals · 22

Find the area of the region enclosed by $y = -x^2 + 4x - 3$ and the x-axis.



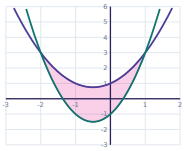
Area Under & Between Curves with Integrals · 23

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



Area Under & Between Curves with Integrals · 24

Find the area of the region enclosed by $y = x^2 + x + 1$ and $y = 2x^2 + 2x - 1$.



Area Under & Between Curves with Integrals · 18

ANSWER

$$\frac{9}{2}$$

Area Under & Between Curves with Integrals · 17

ANSWER

$$27$$

Area Under & Between Curves with Integrals · 20

ANSWER

$$\frac{9}{2}$$

Area Under & Between Curves with Integrals · 19

ANSWER

$$\frac{34}{3}$$

Area Under & Between Curves with Integrals · 22

ANSWER

$$\frac{4}{3}$$

Area Under & Between Curves with Integrals · 21

ANSWER

$$4$$

Area Under & Between Curves with Integrals · 24

ANSWER

$$\frac{9}{2}$$

Area Under & Between Curves with Integrals · 23

ANSWER

$$\frac{11}{3}$$