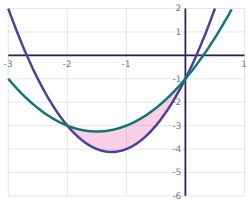
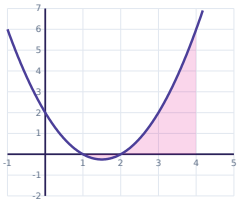
**Task card 1** Area Under & Between Curves with I...

Find the area of the region enclosed by $y = 2x^2 + 5x - 1$ and $y = x^2 + 3x - 1$.



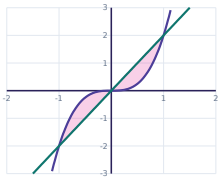
**Task card 2** Area Under & Between Curves with I...

Find the total area between $y = x^2 - 3x + 2$ and the x-axis from $x = 1$ to $x = 4$.



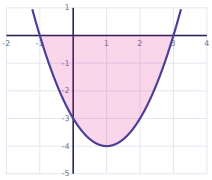
**Task card 3** Area Under & Between Curves with I...

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



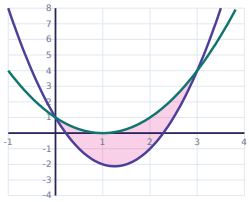
**Task card 4** Area Under & Between Curves with I...

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



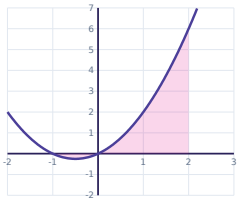
**Task card 5** Area Under & Between Curves with I...

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



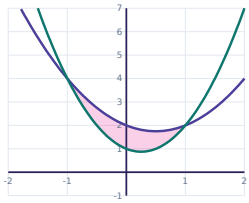
**Task card 6** Area Under & Between Curves with I...

Find the total area between $y = x^2 + x$ and the x-axis from $x = -1$ to $x = 2$.



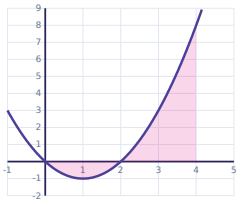
**Task card 7** Area Under & Between Curves with I...

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



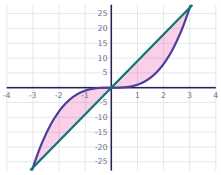
**Task card 8** Area Under & Between Curves with I...

Find the total area between $y = x^2 - 2x$ and the x-axis from $x = 0$ to $x = 4$.



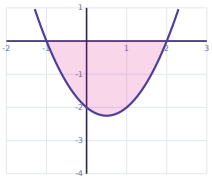
**Task card 9** Area Under & Between Curves with I...

Find the total area of the region enclosed by $y = x^3$ and $y = 9x$.



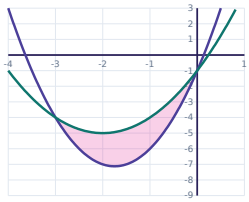
**Task card 10** Area Under & Between Curves with I...

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



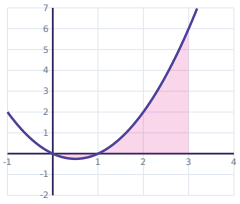
**Task card 11** Area Under & Between Curves with I...

Find the area of the region enclosed by $y = 2x^2 + 7x - 1$ and $y = x^2 + 4x - 1$.



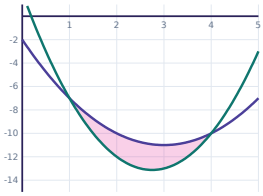
**Task card 12** Area Under & Between Curves with I...

Find the total area between $y = x^2 - x$ and the x-axis from $x = 0$ to $x = 3$.



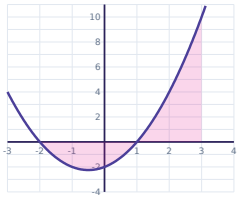
**Task card 13** Area Under & Between Curves with I...

Find the area of the region enclosed by $y = x^2 - 6x - 2$ and $y = 2x^2 - 11x + 2$.



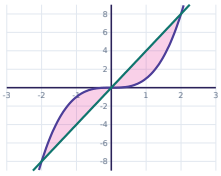
**Task card 14** Area Under & Between Curves with I...

Find the total area between $y = x^2 + x - 2$ and the x-axis from $x = -2$ to $x = 3$.



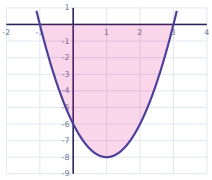
**Task card 15** Area Under & Between Curves with I...

Find the total area of the region enclosed by $y = x^3$ and $y = 4x$.



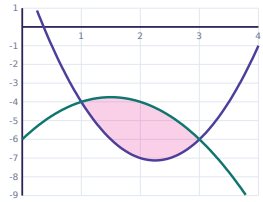
**Task card 16** Area Under & Between Curves with I...

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



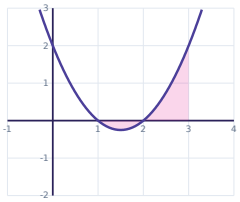
**Task card 17** Area Under & Between Curves with I...

Find the area of the region enclosed by $y = 2x^2 - 9x + 3$ and $y = -x^2 + 3x - 6$.



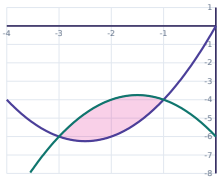
**Task card 18** Area Under & Between Curves with I...

Find the total area between $y = x^2 - 3x + 2$ and the x-axis from $x = 1$ to $x = 3$.



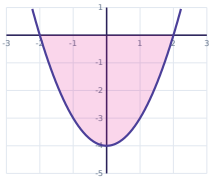
**Task card 19** Area Under & Between Curves with I...

Find the area of the region enclosed by $y = x^2 + 5x$ and $y = -x^2 - 3x - 6$.



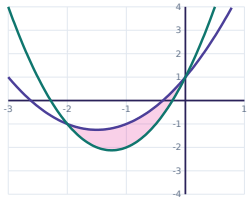
**Task card 20** Area Under & Between Curves with I...

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



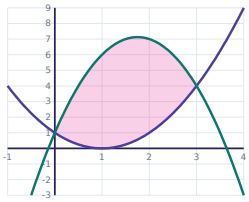
**Task card 21** Area Under & Between Curves with I...

Find the area of the region enclosed by $y = x^2 + 3x + 1$ and $y = 2x^2 + 5x + 1$.



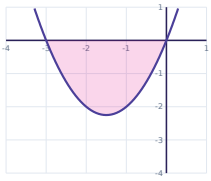
**Task card 22** Area Under & Between Curves with I...

Find the area of the region enclosed by $y = x^2 - 2x + 1$ and $y = -2x^2 + 7x + 1$.



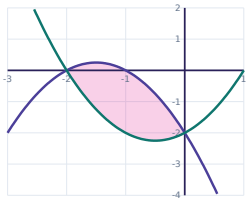
**Task card 23** Area Under & Between Curves with I...

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



**Task card 24** Area Under & Between Curves with I...

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



# Area Under & Between Curves with Integrals Task Cards

Recording sheet · Grade 12 · Find each area. Give an exact answer: a whole number or a fraction in simplest form. An area is never negative.

Scan to check your answers

Name: _____ Date: _____

| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 |

# Area Under & Between Curves with Integrals Task Cards: Answer Key

Grade 12 · Hard

The answers online

| | | |
|---|---|---|
| **1.** $\frac{4}{3}$ | **2.** $\frac{29}{6}$ | **3.** 1 |
| **4.** $\frac{32}{3}$ | **5.** $\frac{9}{2}$ | **6.** $\frac{29}{6}$ |
| **7.** $\frac{4}{3}$ | **8.** 8 | **9.** $\frac{81}{2}$ |
| **10.** $\frac{9}{2}$ | **11.** $\frac{9}{2}$ | **12.** $\frac{29}{6}$ |
| **13.** $\frac{9}{2}$ | **14.** $\frac{79}{6}$ | **15.** 8 |
| **16.** $\frac{64}{3}$ | **17.** 4 | **18.** 1 |
| **19.** $\frac{8}{3}$ | **20.** $\frac{32}{3}$ | **21.** $\frac{4}{3}$ |
| **22.** $\frac{27}{2}$ | **23.** $\frac{9}{2}$ | **24.** $\frac{8}{3}$ |