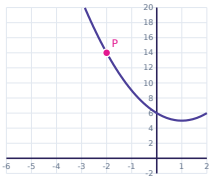
**Task card 1** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = x^2 - 3$ at $x = 3$.



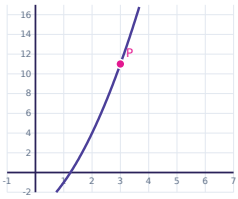

**Task card 2** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = x^2 - 2x + 6$ at $x = -2$.



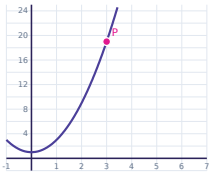

**Task card 3** Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = x^2 + 2x - 4$ at the point P(3, 11).



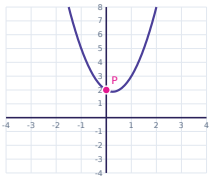

**Task card 4** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 2x^2 + 1$ at $x = 3$.



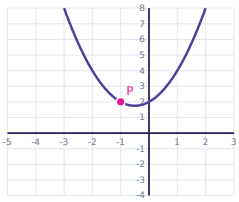

**Task card 5** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 2x^2 - x + 2$ at $x = 0$.



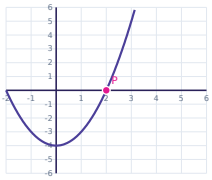

**Task card 6** Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = x^2 + x + 2$ at the point P(-1, 2).



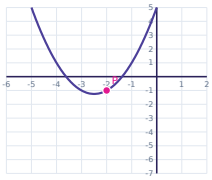
**Task card 7** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = x^2 - 4$ at $x = 2$.



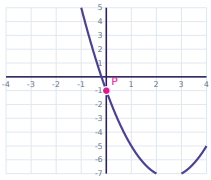

**Task card 8** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = x^2 + 5x + 5$ at $x = -2$.



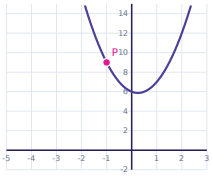

**Task card 9** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = x^2 - 5x - 1$ at $x = 0$.



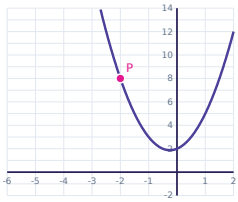

**Task card 10** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 2x^2 - x + 6$ at $x = -1$.



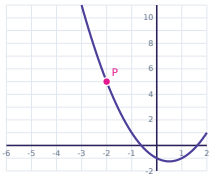

**Task card 11** Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 2x^2 + x + 2$ at the point P(-2, 8).



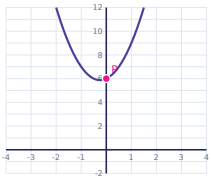

**Task card 12** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = x^2 - x - 1$ at $x = -2$.



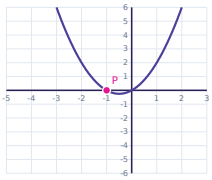
**Task card 13** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 2x^2 + x + 6$ at $x = 0$.




**Task card 14** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = x^2 + x$ at $x = -1$.



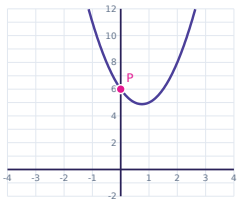

**Task card 15** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 2x^2 - x + 1$ at $x = 2$.



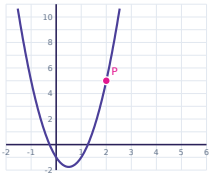

**Task card 16** Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 2x^2 - 3x + 6$ at the point P(0, 6).



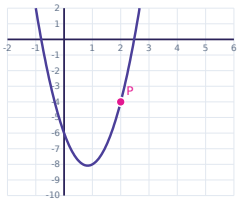

**Task card 17** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 3x^2 - 3x - 1$ at $x = 2$.




**Task card 18** Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 3x^2 - 5x - 6$ at the point P(2, -4).

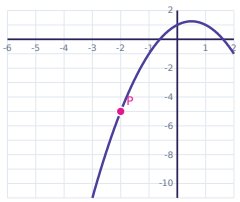


**Task card 19** Slope & Equation of a Tangent Line

At what x-value is the tangent line to $f(x) = x^2 + 8x - 7$ horizontal?

**Task card 20** Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = -x^2 + x + 1$ at the point P(-2, -5).

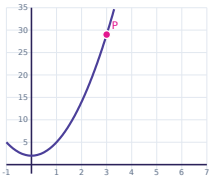



**Task card 21** Slope & Equation of a Tangent Line

At what x-value is the tangent line to $f(x) = 2x^2 - 8x + 4$ horizontal?

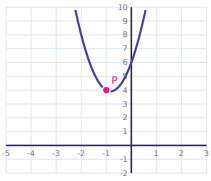
**Task card 22** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 3x^2 + 2$ at $x = 3$.



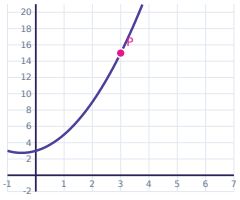

**Task card 23** Slope & Equation of a Tangent Line

Find the slope of the tangent line to $f(x) = 3x^2 + 5x + 6$ at $x = -1$.




**Task card 24** Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = x^2 + x + 3$ at the point P(3, 15).



# Slope & Equation of a Tangent Line Task Cards

Recording sheet · Grade 12 · Answer each question. Write tangent lines in the form y = mx + b.

Name: _____ Date: _____

Scan to check your answers

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

# Slope & Equation of a Tangent Line Task Cards: Answer Key

Grade 12 · Easy

The answers online

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