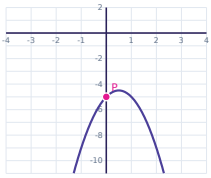
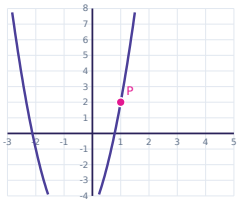
Task card 1 Slope & Equation of a Tangent Line

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



Task card 2 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 3x^2 + 4x - 5$ at the point P(1, 2).

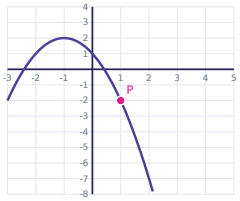


Task card 3 Slope & Equation of a Tangent Line

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

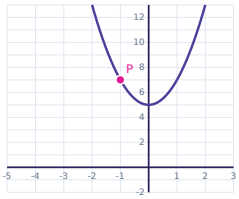
Task card 4 Slope & Equation of a Tangent Line

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



Task card 5 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 2x^2 + 5$ at the point P(-1, 7).



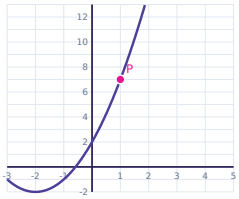
Task card 6 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 2x^2 - 5x$ at the point P(-2, 18).



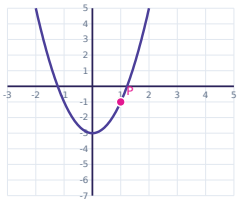
Task card 7 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = x^2 + 4x + 2$ at the point P(1, 7).



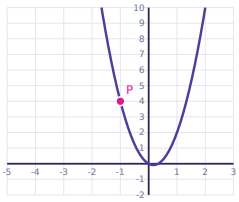
Task card 8 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 2x^2 - 3$ at the point P(1, -1).



Task card 9 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 3x^2 - x$ at the point P(-1, 4).

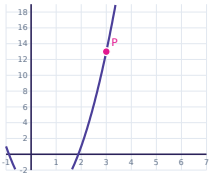


Task card 10 Slope & Equation of a Tangent Line

At what x-value is the tangent line to $f(x) = 2x^2 + 16x + 5$ horizontal?

Task card 11 Slope & Equation of a Tangent Line

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

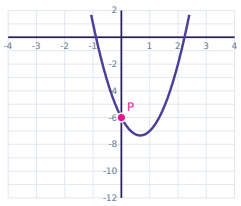


Task card 12 Slope & Equation of a Tangent Line

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

Task card 13 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 3x^2 - 4x - 6$ at the point P(0, -6).



Task card 14 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = x^3 - 2x^2 + 4x - 2$ at the point P(1, 1).

Task card 15 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = -x^3 + x^2 - 2$ at the point P(-3, 34).

Task card 16 Slope & Equation of a Tangent Line

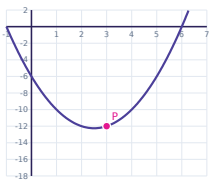
At what x-value is the tangent line to $f(x) = -2x^2 + 20x + 6$ horizontal?

Task card 17 Slope & Equation of a Tangent Line

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

Task card 18 Slope & Equation of a Tangent Line

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



Task card 19 Slope & Equation of a Tangent Line

At what x-value is the tangent line to $f(x) = -x^2 + 4x - 7$ horizontal?

Task card 20 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = x^3 + 2x^2 - 5x - 4$ at the point P(0, -4).

Task card 21 Slope & Equation of a Tangent Line

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



Task card 22 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = 2x^2 + 2x + 1$ at the point P(2, 13).

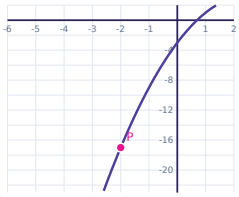


Task card 23 Slope & Equation of a Tangent Line

At what x-value is the tangent line to $f(x) = 3x^2 - 6x + 1$ horizontal?

Task card 24 Slope & Equation of a Tangent Line

Find the equation of the tangent line to $f(x) = -x^2 + 5x - 3$ at the point P(-2, -17).



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 · Medium

The answers online

1. 2	**2.** y = 10x - 8	**3.** x = -2
4. y = -4x + 2	**5.** y = -4x + 3	**6.** y = -13x - 8
7. y = 6x + 1	**8.** y = 4x - 5	**9.** y = -7x - 3
10. x = -4	**11.** 15	**12.** 18
13. y = -4x - 6	**14.** y = 3x - 2	**15.** y = -33x - 65
16. x = 5	**17.** 45	**18.** 1
19. x = 2	**20.** y = -5x - 4	**21.** -19
22. y = 10x - 7	**23.** x = 1	**24.** y = 9x + 1