

Exercice 1 :

1. $f(x) = -5x^2 + \frac{3}{x} + 2\sqrt{x}$.
2. $f(x) = -\frac{2}{x} - 2x^2$.
3. $f(x) = -3\sqrt{x} - \frac{5}{x}$.
4. $f(x) = 3\sqrt{x} - 2x^2 + 2x$.
5. $f(x) = \sqrt{x} - 2x^2 + 4x + 3 - \frac{3}{x}$.

Exercice 2 :

1. $f(x) = -6(9x + 7)x^2$
2. $g(x) = (2 - 10x^2)\sqrt{x}$
3. $h(x) = 5x^2\sqrt{x}$
4. $l(x) = \frac{7x + 5}{x}$
5. $m(x) = (9x^2 + 5x - 1)\sqrt{x}$

Exercice 3 :

1. $f(x) = \frac{1}{5x - 7}$
2. $g(x) = (7x - 1)^7$
3. $h(x) = \sqrt{-2x - 7}$
4. $i(x) = \sqrt{-10x - 6}$
5. $j(x) = (-4x + 6)^4$

Exercice 4 :

1. $f(x) = \frac{1}{5 - 2x}$.
2. $f(x) = \frac{1}{2x + 9}$.
3. $f(x) = \frac{1}{8x^2 + 1}$.
4. $f(x) = \frac{1}{3x^2 + 3}$.
5. $f(x) = \frac{1}{6x^2 - 6}$.

Exercice 5 :

1. $f(x) = \frac{2}{-3 + 4x}$.
2. $f(x) = \frac{-3}{x^2 - 10}$.
3. $f(x) = \frac{-1}{-2x^2 + 5}$.
4. $f(x) = \frac{-2}{-3x - 1}$.
5. $f(x) = \frac{-1}{x - 1}$.

Exercice 6 :

1. $h(x) = e^{-10x-10}$
2. $m(x) = e^{-6x-2}$
3. $n(x) = e^{-10x-5}$
4. $s(x) = e^{6x-9}$
5. $x(x) = e^{-5x-5}$