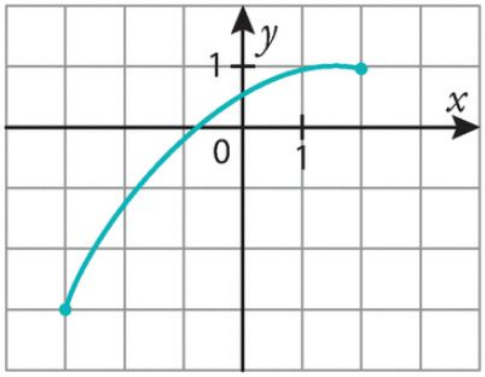
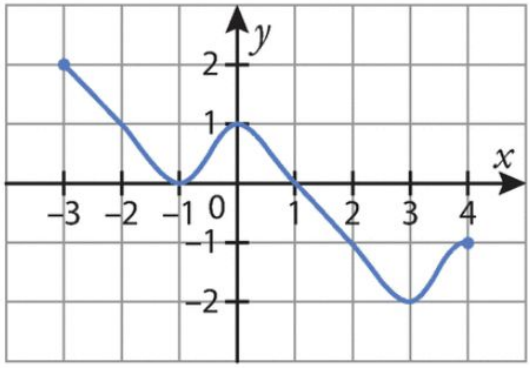
Exercices de renforcement

2. Domaine de définition

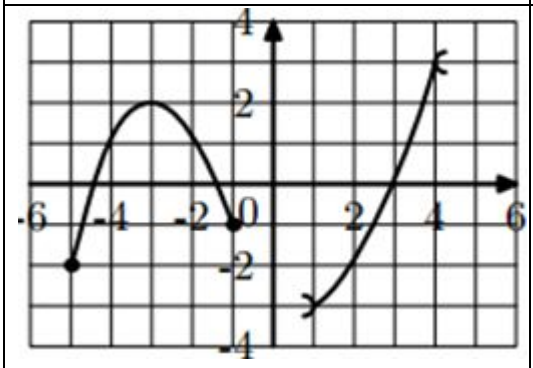
1. Détermine le domaine de définition de chaque fonction :



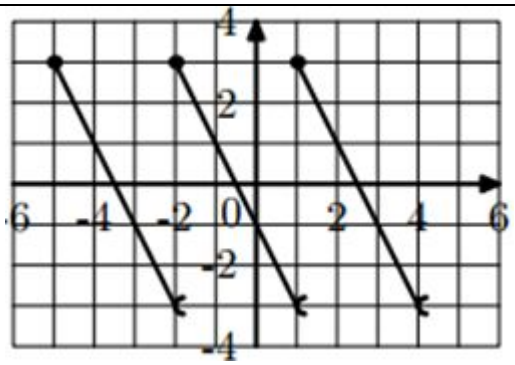
$dom\ f =$



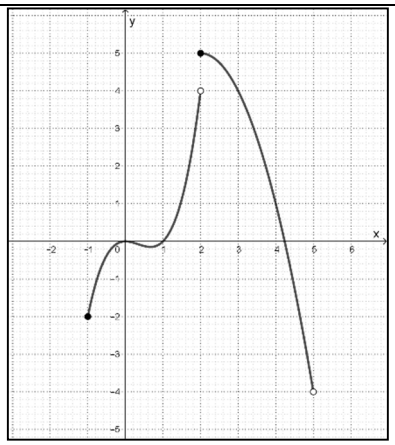
$dom\ f =$



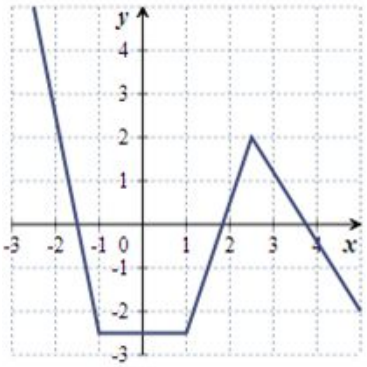
$dom\ f =$



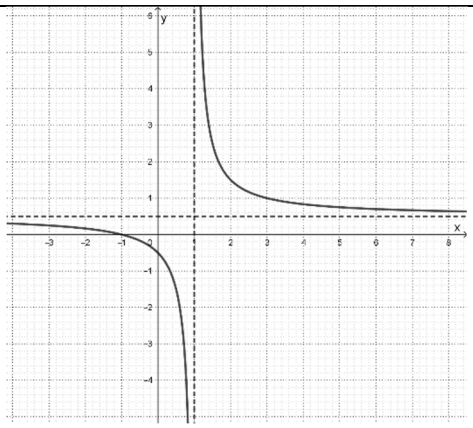
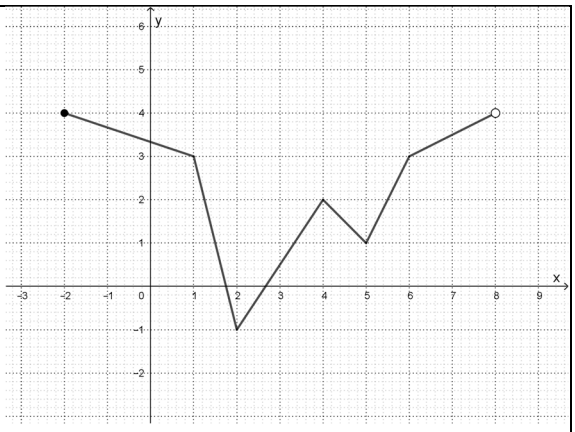
$dom\ f =$



$dom\ f =$



$dom\ f =$

	
$dom\ f =$	$dom\ f =$

2. Pose les conditions d'existence et détermine le domaine de définition des fonctions suivantes :

(1) $f(x) = 3 + 2\sqrt{x}$

(2) $f(x) = \dfrac{5+x}{10-x}$

(3) $f(x) = 4x + \dfrac{1}{x}$

(4) $f(x) = \dfrac{3x}{2x^2 + 8x}$

(5) $f(x) = 3x^3 - 3x$

(6) $f(x) = \dfrac{1}{x^2 - 1}$

(7) $f(x)=\sqrt{3-4x}$

(8) $f(x)=\dfrac{\sqrt{3x+4}}{\sqrt{x-1}}$

(9) $f(x)=\sqrt{-2x}$

(10) $f(x)=\dfrac{1}{2x^2-8x+8}$

(11) $f(x)=\dfrac{3}{\sqrt{3x-6}}$

(12) $f(x)=\dfrac{\sqrt{2-x}}{\sqrt{5x-1}}$

(13) $f(x)=\sqrt{1-x}+\sqrt{2x+3}$

(14) $f(x)=\dfrac{1}{x-2}+\dfrac{1}{x+2}$

(15) $f(x)=\dfrac{3x+1}{4x^2-36}$

(16) $f(x)=\dfrac{3x+1}{(2x+3)(2x-3)}$

(17) $f(x)=\dfrac{2}{x+3}+\dfrac{3}{x}$

(18) $f(x)=\dfrac{\sqrt{x}}{x-1}$

3. Invente l'expression analytique d'une fonction dont le domaine de définition est $[1;4[$.