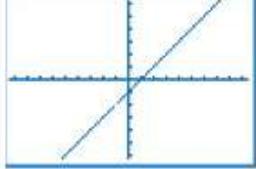
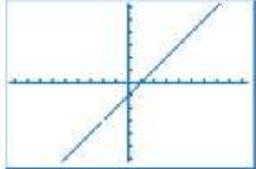
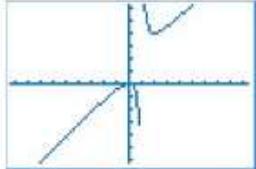
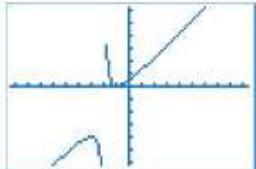
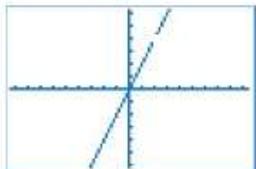


### Group I

Function	Sketch of graph	Vertical asymptotes	Horizontal asymptote	Non-permissible values of $x$
$y = \frac{x^2 - 1}{x + 1}$		-	-	-1
$y = \frac{x^2 + x - 2}{x + 2}$		-	-	-2
$y = \frac{x^2}{x - 1}$		$x = 1$	-	1
$y = \frac{x^2 + 2x + 1}{x + 2}$		$x = -2$	-	-2
$y = \frac{2x^2 - 4x}{x - 2}$		-	-	2

## Group II

Function	Sketch of graph	Vertical asymptotes	Horizontal asymptote	Non-permissible values of $x$
$y = \frac{3x}{x - 1}$		$x = 1$	$y = 3$	1
$y = \frac{x^2 - 1}{x^2 - 4}$		$x = \pm 2$	$y = 1$	±2
$y = \frac{-2x + 4}{x - 1}$		$x = 1$	$y = -2$	1

### Group III

Function	Sketch of graph	Vertical asymptotes	Horizontal asymptote	Non-permissible values of $x$
$y = \frac{6}{x^2 + 2}$		—	$y = 0$	—
$y = \frac{2}{-x^2 + 2x + 3}$		$x = -1; x = 3$	$y = 0$	$-1, 3$
$y = \frac{4}{x^2}$		$x = 0$	$y = 0$	$0$
$y = \frac{2x}{x^2}$		$x = 0$	$y = 0$	$0$
$y = \frac{4x}{x^2 + 1}$		—	$y = 0$	—