

Correction : tableau de signes d'une fonction affine

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Exercice

1) $f(x) = 5x + 10$.

$$f(x) = 0 \iff 5x + 10 = 0 \iff 5x = -10 \iff x = -\frac{10}{5} \iff x = -2.$$

x	$-\infty$	-2	$+\infty$		
$f(x)$		$-$	0	$+$	$(m = 5)$

2) $g(x) = 4x - 6$.

$$g(x) = 0 \iff 4x - 6 = 0 \iff 4x = 6 \iff x = \frac{6}{4} \iff x = \frac{3}{2}.$$

x	$-\infty$	$\frac{3}{2}$	$+\infty$		
$g(x)$		$-$	0	$+$	$(m = 4)$

3) $h(x) = -2x + 3$.

$$h(x) = 0 \iff -2x + 3 = 0 \iff 3 = 2x \iff \frac{3}{2} = x \iff x = \frac{3}{2}.$$

x	$-\infty$	$\frac{3}{2}$	$+\infty$		
$h(x)$		$+$	0	$-$	$(m = -2)$

4) $t(x) = 5 - 10x$.

$$t(x) = 0 \iff 5 - 10x = 0 \iff 5 = 10x \iff \frac{5}{10} = x \iff x = \frac{1}{2}.$$

x	$-\infty$	$\frac{1}{2}$	$+\infty$		
$t(x)$		$+$	0	$-$	$(m = -10)$

5) $u(x) = -6x - 12$.

$$u(x) = 0 \iff -6x - 12 = 0 \iff -6x = 12 \iff x = \frac{12}{-6} \iff x = -2.$$

x	$-\infty$	-2	$+\infty$		
$u(x)$		$+$	0	$-$	$(m = -6)$