

Start

$(2x - 1)$  is a factor of  $f(x)$

$f(-1) = 0$	$(x + 1)$ is not a factor of $f(x)$	$f(-1) \neq 0$	$f(2) = 2$	When $f(x)$ is divided by $(x - 2)$ , the remainder is 2	$f\left(\frac{1}{2}\right) = 0$
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$(x + 1)$  is a factor of  $f(x)$

$f\left(\frac{1}{2}\right) = 2$

When $f(x)$ is divided by $(2x - 1)$ , the remainder is 2	When $f(x)$ is divided by $(2x + 1)$ , the remainder is 2	$f\left(-\frac{1}{2}\right) = 2$	$f(1) = 2$	When $f(x)$ is divided by $(x - 1)$ , the remainder is 2	$(2x - 1)$ is not a factor of $f(x)$
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$$f\left(\frac{1}{2}\right) \neq 0$$

When  $f(x)$  is divided by  $(x+1)$ , the remainder is 2

$f(-2) = 0$	$f(2) = 0$	$(x-2)$ is a factor of $f(x)$	$(x-1)$ is a factor of $f(x)$	$f(1) = 0$	$f(-1) = 2$
$(x+2)$ is a factor of $f(x)$					
$f(-2) = 2$					
When $f(x)$ is divided by $(x+2)$ , the remainder is 2	$f\left(-\frac{1}{2}\right) = 0$	$(2x+1)$ is a factor of $f(x)$	$f(1) \neq 0$	$(x-1)$ is not a factor of $f(x)$	<b>Finish</b>