

**Geogebra Activity Guide**

1. Find the slope of  $f(x)$ .

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2. Find the slope when  $g(x)$  is parallel to the line  $f(x)$ .

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3. Find the slope when  $g(x)$  is perpendicular to the line  $f(x)$

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4. What does slider  $m$  affect when moved?

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5. What does slider  $b$  affect when moved?

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6. When  $b = 0$ , what is true for both graphs  $f(x)$  and  $g(x)$ ?

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7. Complete the following table:

$m$ and $b$	$f(x)$	$g(x)$	Slope	Y-intercept	Parallel, Perpendicular, or neither
$m=0,$ $b=5$					
$m=4.5,$ $b=0$					
$m=-6,$ $b=1$					
$m=.5,$ $b=10$					
$m=2,$ $b=-6$					
$m=1,$ $b=0$					

8. Were any functions  $g(x)$  similar or identical to the function  $f(x)$ ? If so, which one(s)?

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