

Chain Rule: Station 1

Let $h(x) = f(g(x))$. Use the table below to answer the following questions.

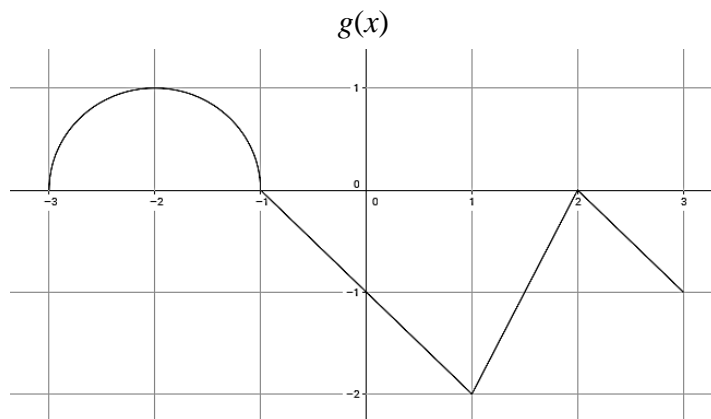
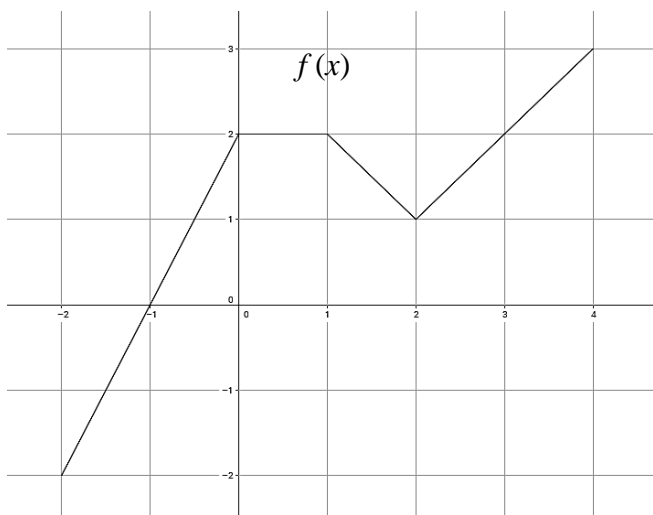
x	1	2	3
$f(x)$	-2	8	1
$f'(x)$	3	2	4
$g(x)$	1	-3	2
$g'(x)$	4	1	-3

1. $h(3) =$
2. $h'(x) =$
3. $h'(1) =$
4. Write the equation of the tangent line to $h(x)$ at $x = 3$.

Chain Rule: Station 2

1. $f(x) = \sin(3x)$
 $f'(x) =$
2. $f(x) = x^2 \cos(2x+3)$
 $f'(x) =$
3. $g(x) = \sin^2(3x^2 - 2x + 1)$
 $g'(x) =$

Chain Rule: Station 3



1. If $h(x) = g(f(x))$, find $h(2)$
2. If $h(x) = g(f(x))$, find $h'(-1)$
3. If $k(x) = f(x^3)$, find $k'(-1)$
4. Find the equation of the tangent line to $k(x)$ at $x = -1$.

Chain Rule: Station 4

Given that $s(x) = f(x^3)$, use the table below to answer the following questions.

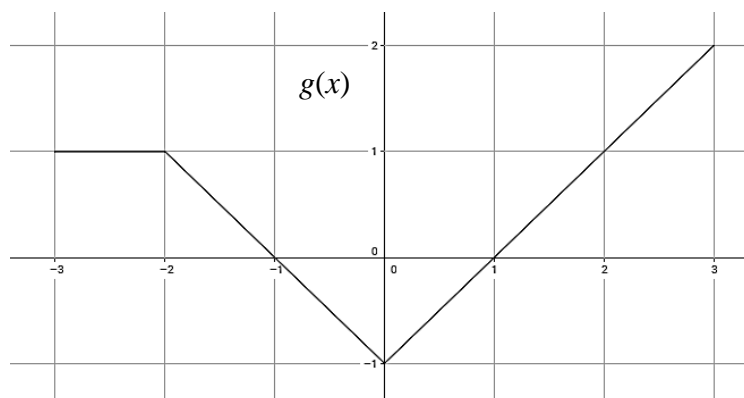
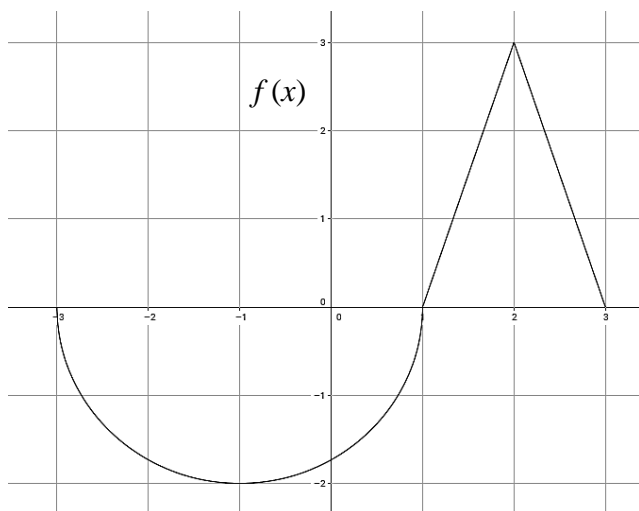
x	-8	-2	-1	1
$f(x)$	3	1	-1	2
$f'(x)$	4	-3	2	1

1. $s(-1) =$
2. $s'(x) =$
3. $s'(1) =$
4. Write the equation of the tangent line to $s(x)$ when $x = -2$

Chain Rule: Station 5

1. $f(x) = \sqrt{2x}$
 $f'(2) =$
2. $f(x) = (x^2 - 2x - 1)^{\frac{2}{3}}$
 $f'(0) =$
3. $f(x) = x\sqrt{2x-3}$
 $f'(x) =$

Chain Rule: Station 6



1. If $h(x) = f(g(x))$, find $h(3)$
2. If $h(x) = f(g(x))$, find $h'(2)$.
3. If $p(x) = g(x^2 - x)$, find $p'(-1)$
4. If $q(x) = \frac{f(x)}{(3x-1)^2}$, find $q'(-1)$