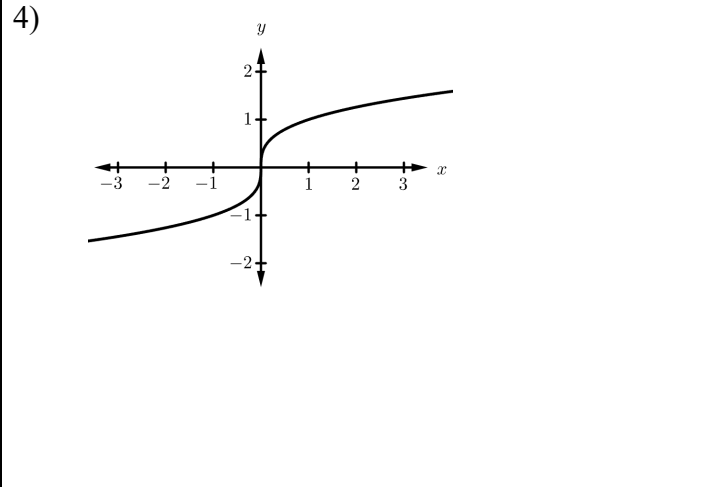
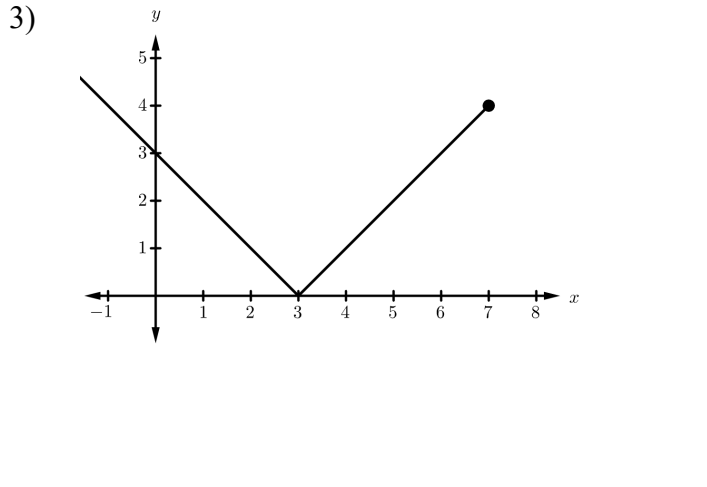
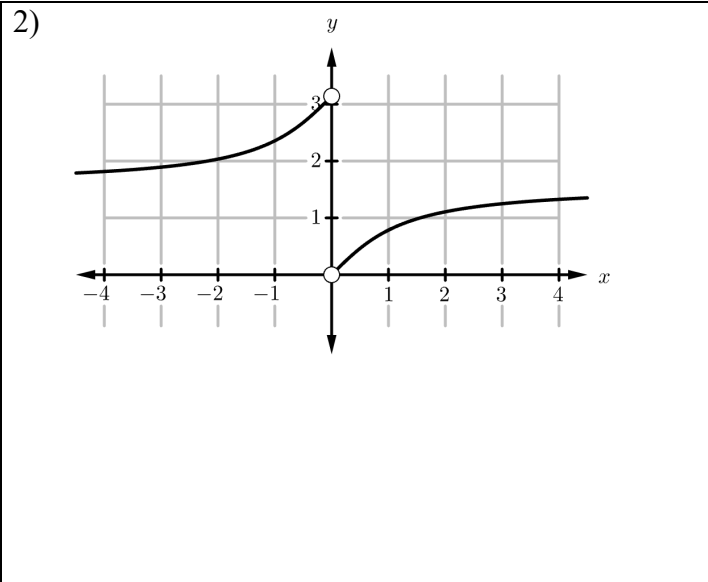
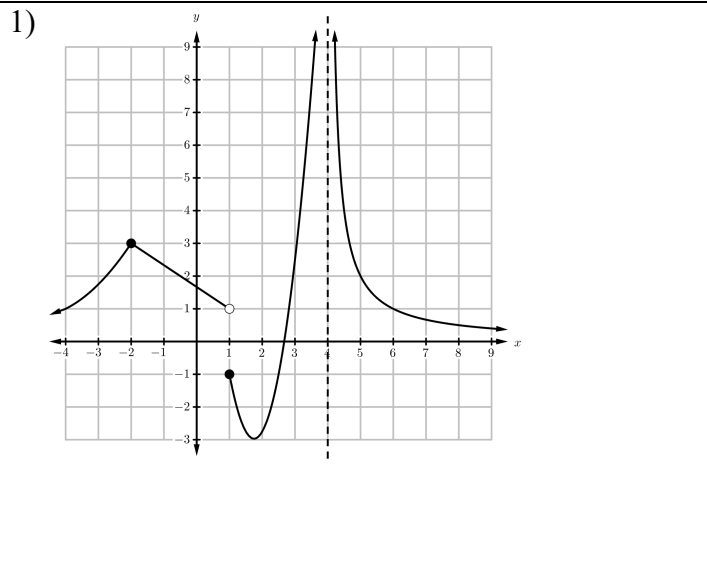
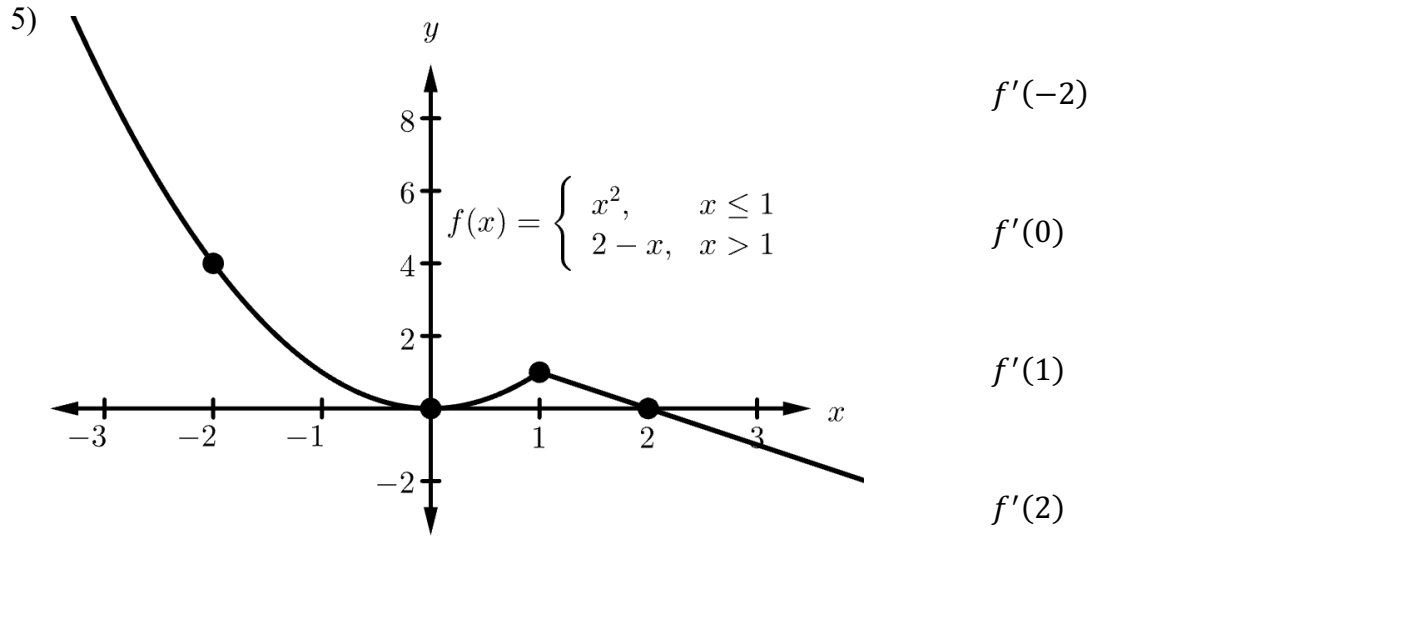


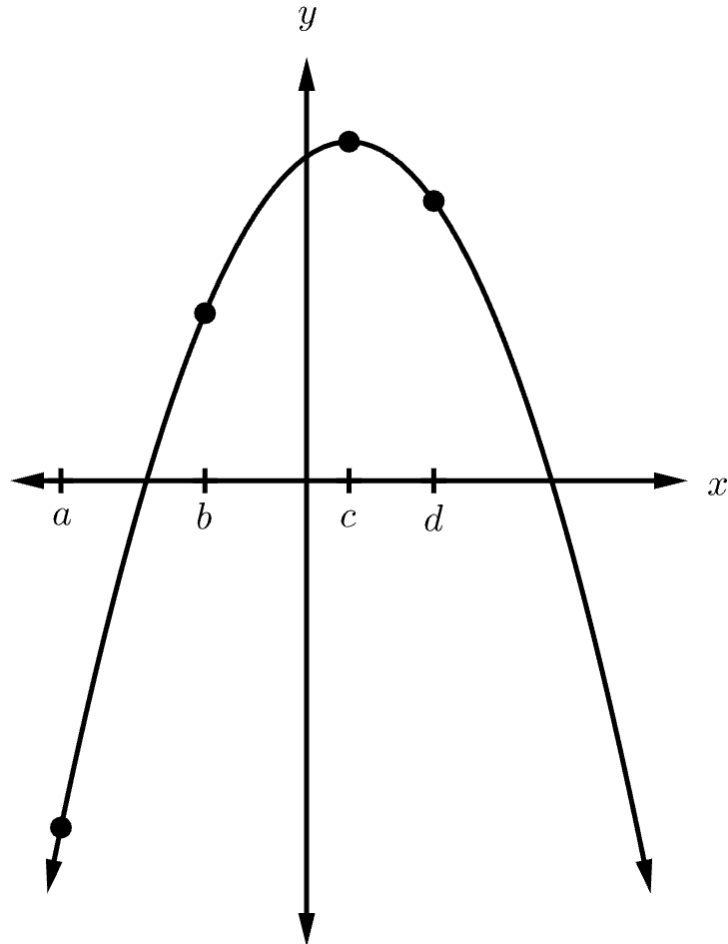
Directions: For each graph in 1-4, determine any points where the function is not differentiable and state why.



Directions: For #5, sketch the derivative at each of the indicated points and determine whether the slope of the tangent line is positive ( $f'(c) > 0$ ), negative ( $f'(c) < 0$ ), zero ( $f'(c) = 0$ ), or DNE ( $f'(c) = DNE$ ).



- 6) For #6, first sketch the derivative at each of the indicated points (parts a-e) and determine whether the slope of the tangent line is positive ( $f'(c) > 0$ ), negative ( $f'(c) < 0$ ), zero ( $f'(c) = 0$ ), or DNE ( $f'(c) = DNE$ ). Second, sketch the average rate of change over each indicated interval (parts f-h).



a.  $f'(a)$

b.  $f'(b)$

c.  $f'(0)$

d.  $f'(c)$

e.  $f'(d)$

f.  $\frac{f(c)-f(a)}{c-a}$

g.  $\frac{f(c)-f(b)}{c-b}$

h.  $\frac{f(c)-f(0)}{c-0}$