

1. For each of the transformed functions below make a simple sketch and then check with Geogebra. You can save yourself time by creating a generic function:

$g(x) = a * f[b(x - c)] + d$  with sliders for  $a$ ,  $b$ ,  $c$  and  $d$ , and then type in specific functions for  $f(x)$ . Start by identifying the parent function.

a)  $y = -2(x + 3)$

b)  $y = |5\sin(x)| + 2$

c)  $y = \ln(3 - x)$

d)  $y = \sqrt{1 - \left(\frac{x}{3}\right)^2} + 2$

e)  $y = 4 - \sqrt{2 - x}$

f)  $y = -(x + 2)^2 + 5$

2. Write a transformed function for each graph below. Verify with geogebra.

