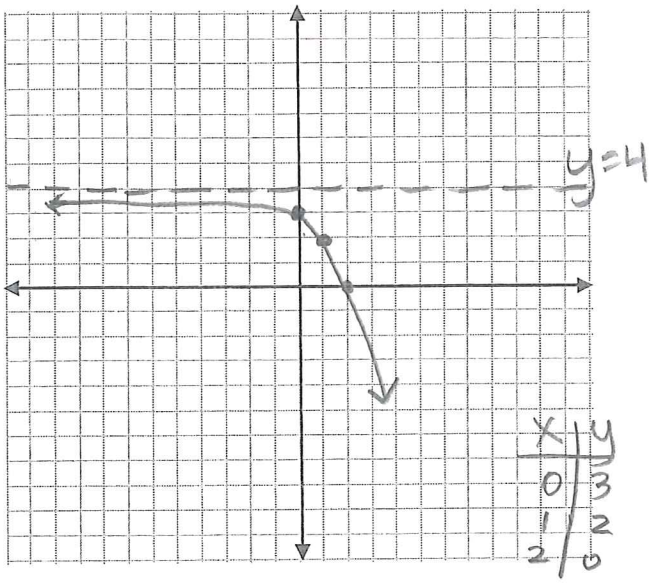
Chapter 7 Target 1 Practice Homework Name: Key

Graph the function on the coordinate plane and fill in all the information.



1. Graph: $f(x) = -2^x + 4$

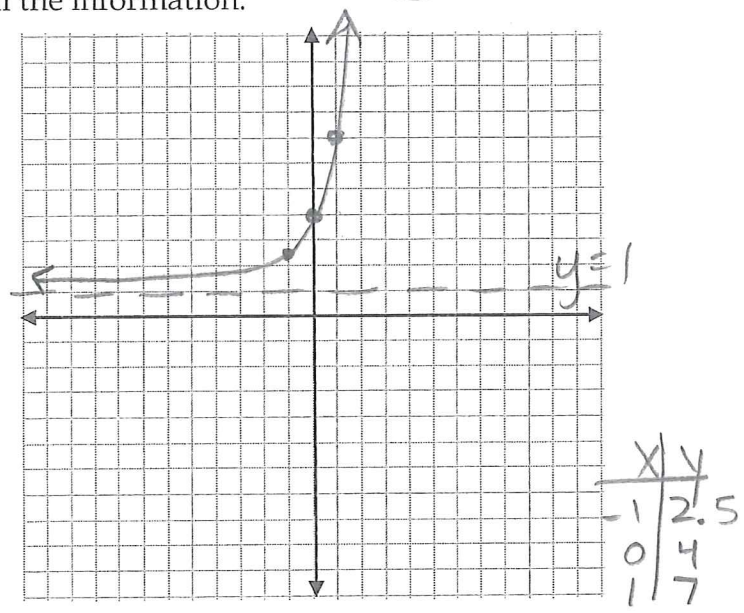
Transformations: flips; shift up 4

Horizontal asymptote: $y = 4$

y-intercept: $(0, 3)$

Domain: $(-\infty, \infty)$

Range: $(-\infty, 4)$



2. Graph: $f(x) = 3 \cdot 2^x + 1$

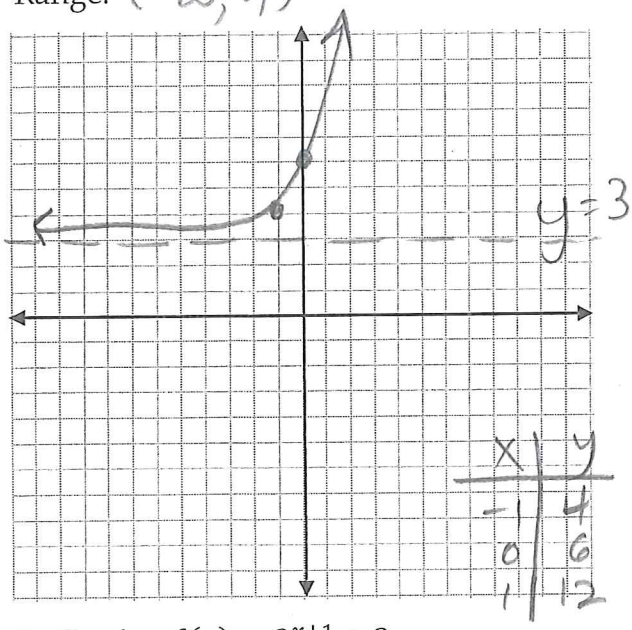
Transformations: stretch by 3; shift up 1

Horizontal asymptote: $y = 1$

y-intercept: $(0, 4)$

Domain: $(-\infty, \infty)$

Range: $(1, \infty)$



3. Graph: $f(x) = 3^{x+1} + 3$

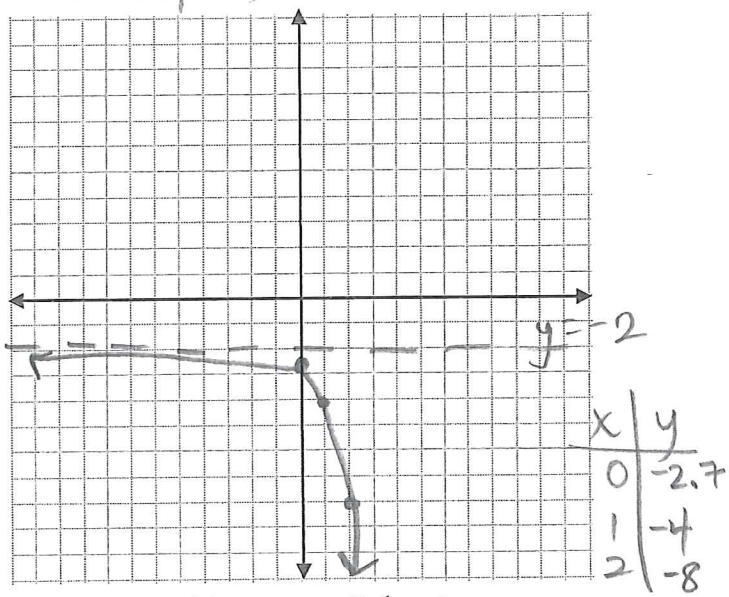
Transformations: shift left 1, up 3

Horizontal asymptote: $y = 3$

y-intercept: $(0, 6)$

Domain: $(-\infty, \infty)$

Range: $(3, \infty)$



4. Graph: $f(x) = -2 \cdot 3^{x-1} - 2$

Transformations: flip; stretch by 2; shift right 1, down 2

Horizontal asymptote: $y = -2$

y-intercept: $(0, -2.7)$

Domain: $(-\infty, \infty)$

Range: $(-\infty, -2)$