

Due before

2/10

1. $f(x) = 3\left(\frac{4}{5}\right)^{x-3} + 2$

Parent Function $f(x) = \frac{4}{5}^x$

Transformations
stretch, up 2 units, right 3

Growth/Decay decay

Domain $(-\infty, \infty)$

Asymp $y = 2$

Range $(2, \infty)$

2. $f(x) = \left(\frac{7}{3}\right)^{x+5}$

PF $f(x) = \left(\frac{7}{3}\right)^x$

Transf. left 5

Growth/Decay growth

Domain $(-\infty, \infty)$

Asymp $y = 0$

Range $(0, \infty)$

3. $f(x) = \frac{2}{3}\left(7\right)^x - 3$

PF $F(x) = 7^x$

Transf
compression, down 3,

Growth/Decay growth

Domain $(-\infty, \infty)$

Asym $y = -3$

Range $(-3, \infty)$

4. $f(x) = \frac{3}{2}\left(\frac{2}{3}\right)^{x-4} + 1$

PF $F(x) = \left(\frac{2}{3}\right)^x$

Transf up 1 unit, right 4
stretch

Growth/Decay decay

Domain $(-\infty, \infty)$

Asym $y = 1$

Range $(1, \infty)$