

Test Review - Exponential Equations

Date _____ Period _____

Solve each equation.

1) $25^{-x-1} = 125$

2) $64^{-x} = 16$

3) $4^{2b} = 16$

4) $81^{p+1} = 27^{2-3p}$

5) $216^{2x+1} = 36$

6) $4^{1-m} = 32^{-2m-3}$

7) $16^{-3n} = 64$

8) $343^{2n} = 49^{n+1}$

9) $25 = x^{\frac{2}{3}}$

10) $a^{-\frac{1}{2}} = \frac{1}{3}$

11) $m^{\frac{5}{4}} = 243$

12) $x^{\frac{3}{2}} = 27$

13) $r^{\frac{3}{2}} + 7 = 132$

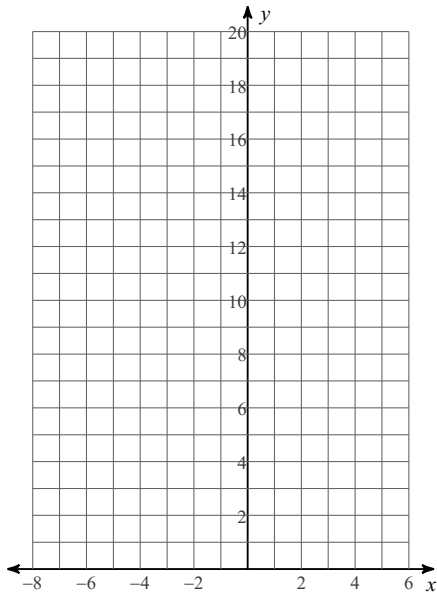
14) $9 + 3v^{\frac{3}{2}} = 90$

15) $2r^{\frac{3}{2}} + 8 = 62$

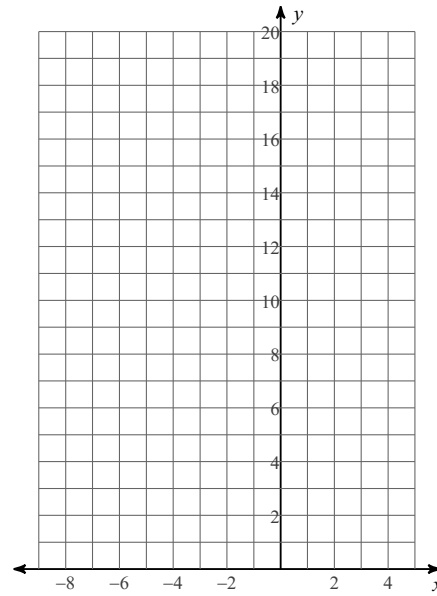
16) $n^{\frac{1}{4}} + 4 = 7$

List the transformations. Write the equation of the asymptote. Write the domain and range. Sketch the graph of each function.

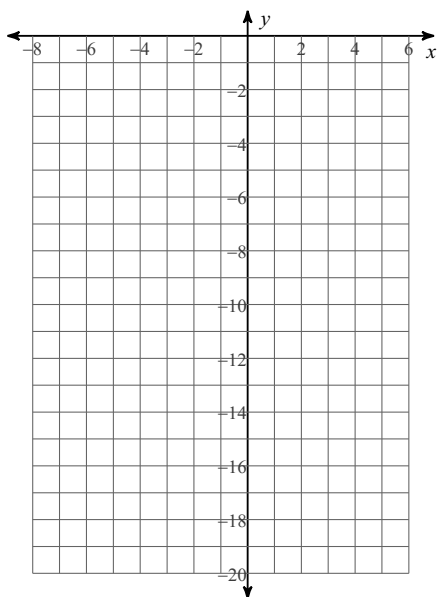
17) $f(x) = 4 \cdot 2^{x+1} + 2$



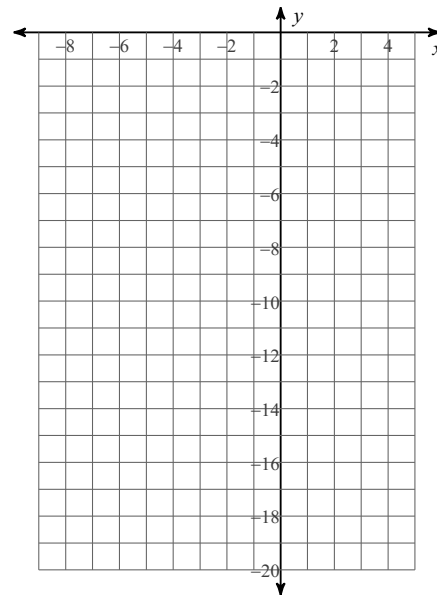
18) $f(x) = 4 \cdot 2^{x+2} + 2$



19) $f(x) = -\frac{1}{2} \cdot 2^{x+1} - 2$



20) $f(x) = -4 \cdot 2^{x+2} - 2$



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Date _____ Period _____

Solve each equation.

1) $25^{-x-1} = 125$

$\left\{-\frac{5}{2}\right\}$

2) $64^{-x} = 16$

$\left\{-\frac{2}{3}\right\}$

3) $4^{2b} = 16$

$\{1\}$

4) $81^{p+1} = 27^{2-3p}$

$\left\{\frac{2}{13}\right\}$

5) $216^{2x+1} = 36$

$\left\{-\frac{1}{6}\right\}$

6) $4^{1-m} = 32^{-2m-3}$

$\left\{-\frac{17}{8}\right\}$

7) $16^{-3n} = 64$

$\left\{-\frac{1}{2}\right\}$

8) $343^{2n} = 49^{n+1}$

$\left\{\frac{1}{2}\right\}$

9) $25 = x^{\frac{2}{3}}$

$\{125, -125\}$

10) $a^{-\frac{1}{2}} = \frac{1}{3}$

$\{9\}$

11) $m^{\frac{5}{4}} = 243$

$\{81\}$

12) $x^{\frac{3}{2}} = 27$

$\{9\}$

13) $r^{\frac{3}{2}} + 7 = 132$

$\{25\}$

14) $9 + 3v^{\frac{3}{2}} = 90$

$\{9\}$

15) $2r^{\frac{3}{2}} + 8 = 62$

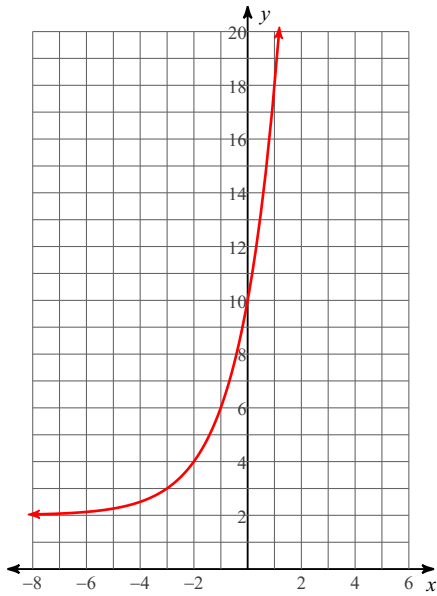
$\{9\}$

16) $n^{\frac{1}{4}} + 4 = 7$

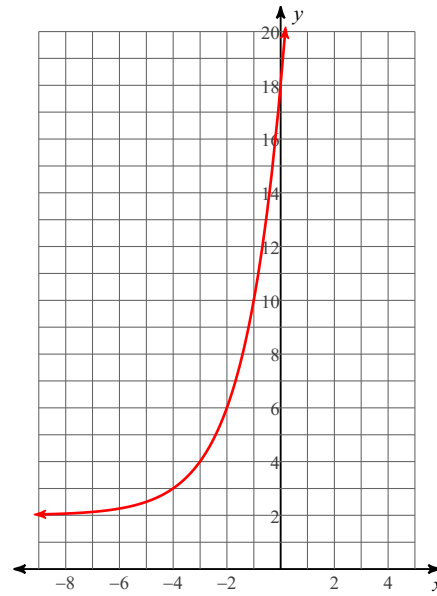
$\{81\}$

List the transformations. Write the equation of the asymptote. Write the domain and range. Sketch the graph of each function.

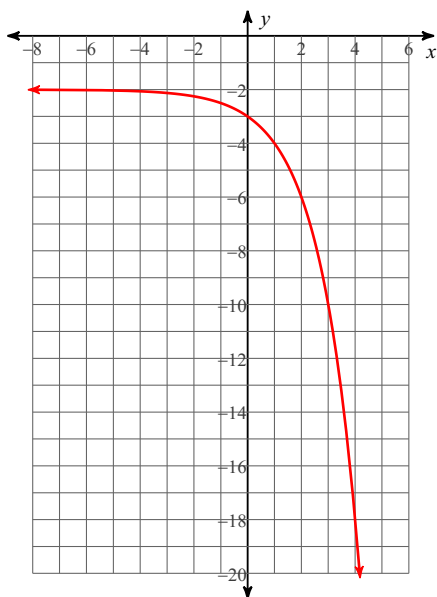
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