

Exponents Equations and Graphs

Date _____

Solve each equation.

1) $2^{3-3p} = 2^{-p}$

2) $5^{1-2v} = 125$

3) $243^{2m} = \frac{1}{3}$

4) $125^{-3x} = 25^{-2x}$

5) $\frac{2^{2x+2}}{2^{-x}} = 2^{1-3x}$

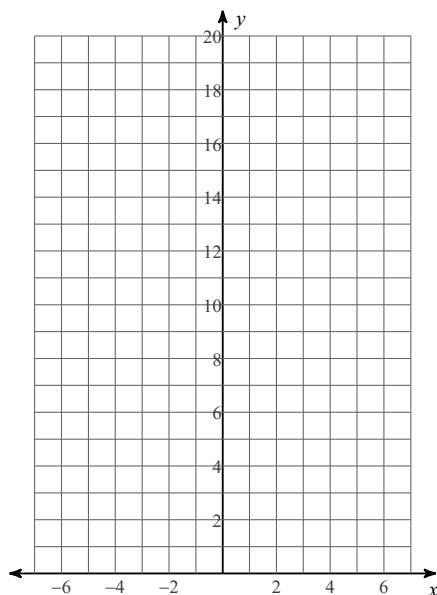
6) $\frac{4^{2x+1}}{4^{-3x}} = 16$

7) $25^{2n} \cdot 625^{2n-1} = 625^{-3n}$

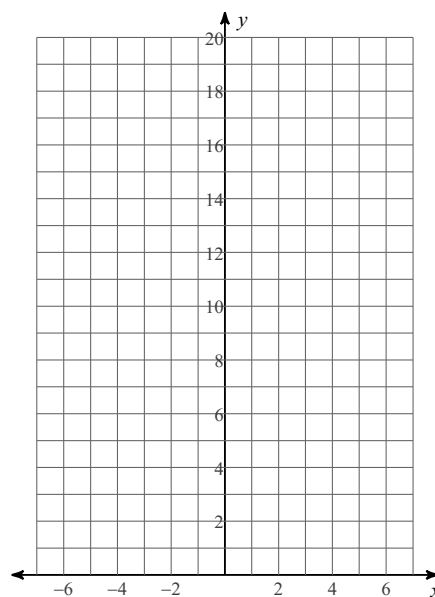
8) $36^{3x} \cdot 6^2 = \frac{1}{216}$

State the y intercept, the base, and whether the graph would be increasing or decreasing.

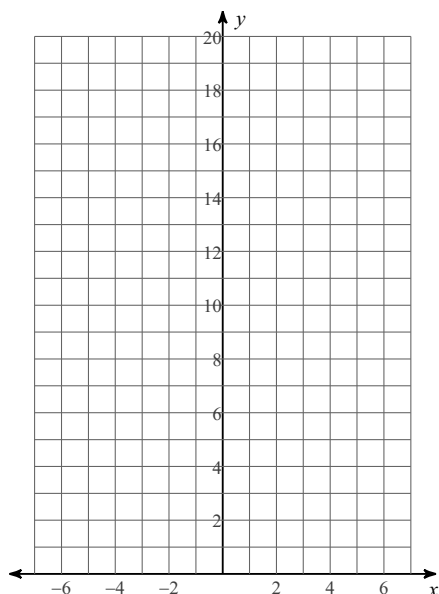
9) $y = 4 \cdot 2^x$



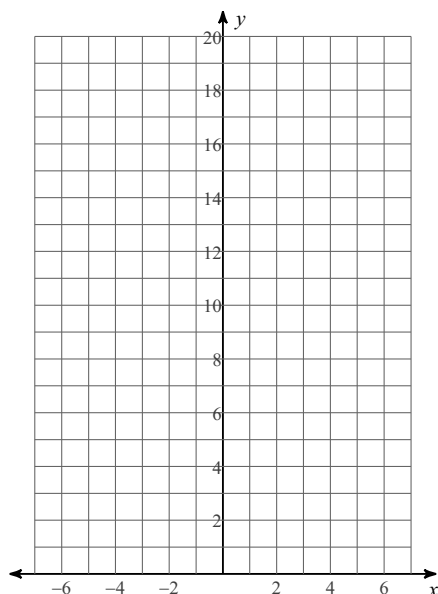
10) $y = \frac{1}{3} \cdot 6^x$



11) $y = \frac{1}{2} \cdot \left(\frac{1}{6}\right)^x$

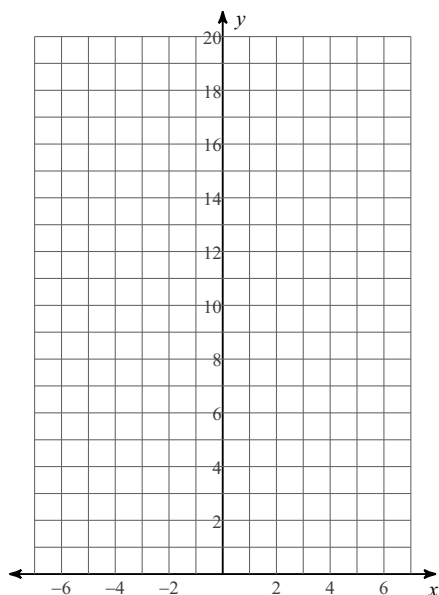


12) $y = \frac{1}{3} \cdot \left(\frac{1}{3}\right)^x$



Sketch the graph of each function by putting it into your graphing calculator and then sketching it on the graph provided. Give the number of x intercepts. State the y intercept, the end behavior, and the domain and range.

13) $y = 5 \cdot 2^x$



14) $y = \frac{1}{2} \cdot 4^x$

