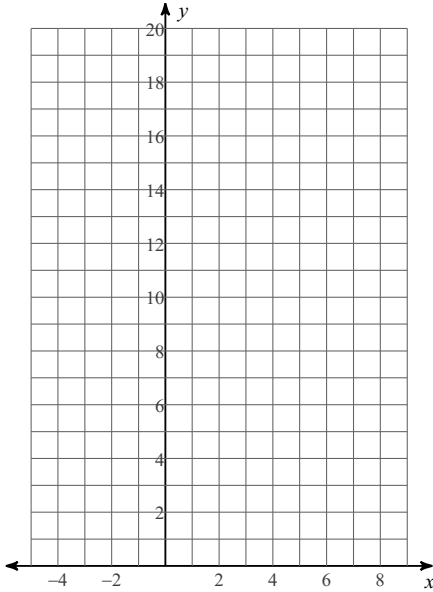


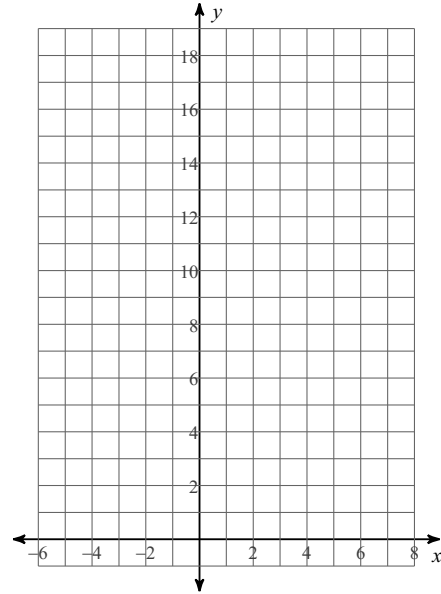
# Exponentials

Sketch the graph of each function.

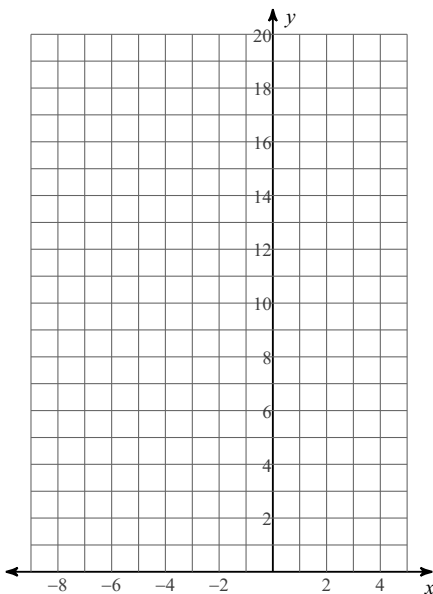
1)  $y = \left(\frac{1}{2}\right)^{x-2} + 1$



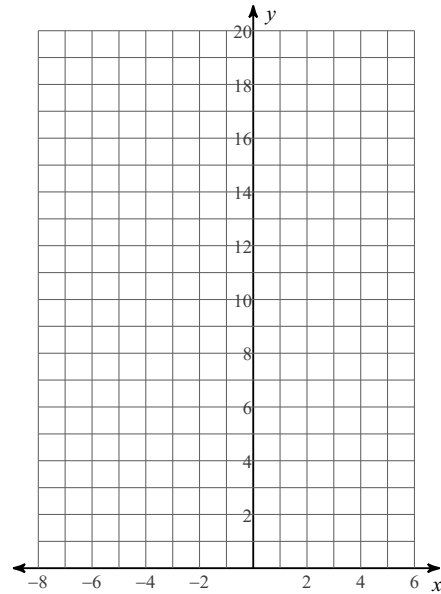
2)  $y = 2^{x-1} - 1$



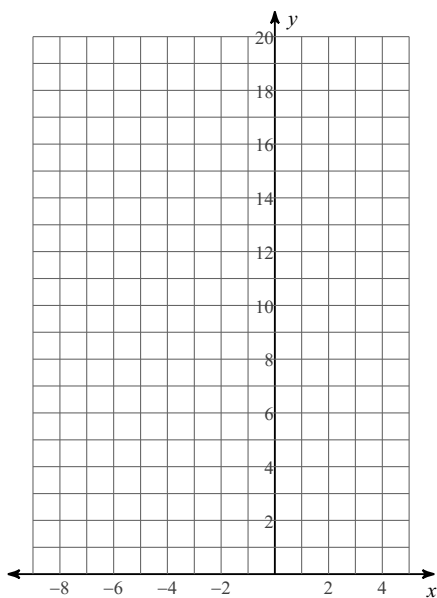
3)  $y = \left(\frac{1}{2}\right)^{x+2} + 2$



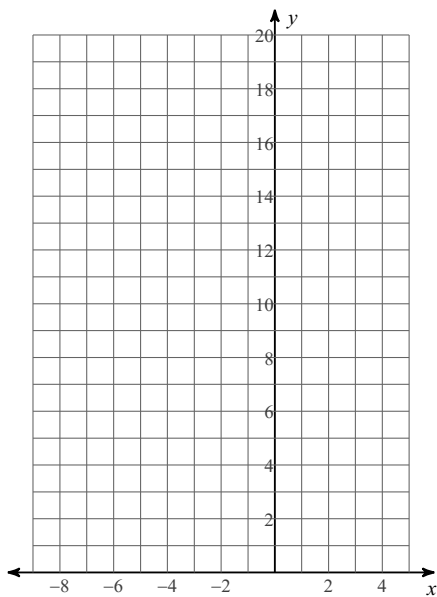
4)  $y = 2^{x+1} + 2$



$$5) y = \left(\frac{1}{2}\right)^{x+2} + 1$$



$$7) y = \left(\frac{1}{4}\right)^{x+2} + 2$$



**Solve each equation.**

$$9) 2^{-x} = 8$$

$$11) 2^{-2x} = 4$$

$$13) 3^{2-3x} = 81$$

$$15) 6^{1-3p} = 6^{2p}$$

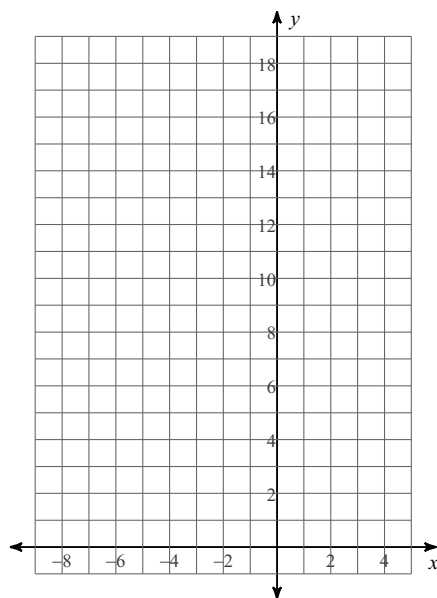
$$17) 3^{-2b-1} = 3^{-2b}$$

$$19) 625^{2x+2} = 125^{-2x}$$

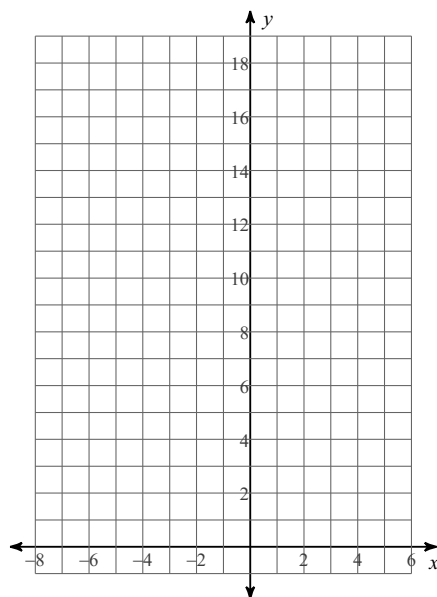
$$21) 25^{-3x} \cdot 625^{-2x} = 625$$

$$23) \left(\frac{1}{81}\right)^{-2n} = \left(\frac{1}{3}\right)^{n+3}$$

$$6) y = \left(\frac{1}{4}\right)^{x+2} - 1$$



$$8) y = 4^{x+1} - 1$$



$$10) 5^{2n} = 5^{3n}$$

$$12) 4^{-3x+2} = 64$$

$$14) 2^{1-2n} = 1$$

$$16) 5^{-3k} = 5^{2k+1}$$

$$18) 2^{2n+3} = \frac{1}{64}$$

$$20) 25^{-m-3} = \frac{1}{625}$$

$$22) 216^{-b-2} = 36$$

$$24) 8^r = 16^{3-r}$$