

3, 9, 17, 19, 27,

5) (3,1), (5,4) write

an exp. function $y = ab^x$
whose graph passes through
these points.

$$\textcircled{1} 4 = ab^5$$

$$\textcircled{2} \frac{4}{b^5} = a$$

$$\textcircled{3} 1 = ab^3$$

$$\textcircled{4} 1 = \frac{4}{b^5} \cdot b^3$$

$$1 = \frac{b^3}{b^5} \cdot 4$$

$$1 = b^{-2} \cdot 4$$

$$\textcircled{5} \frac{1}{4} = \frac{1}{b^2}$$

$$b^2 = 4$$

$$b = 2$$

$$\textcircled{6} \frac{4}{2^5} = a$$

$$a = \frac{4}{32}$$

$$a = \frac{1}{8}$$

$$\textcircled{7} y = \frac{1}{8} \cdot 2^x$$

① First I write the exponential function with one of the coordinates given.

② Next I solve for a

③ I substitute the other coord. in the exp. model

④ substitute our a into the second equation

⑤ solve for b, always take the positive root because $b > 0$ by def.

⑥ solve for a by sub. in our b

⑦ write our complete equation