

1.2

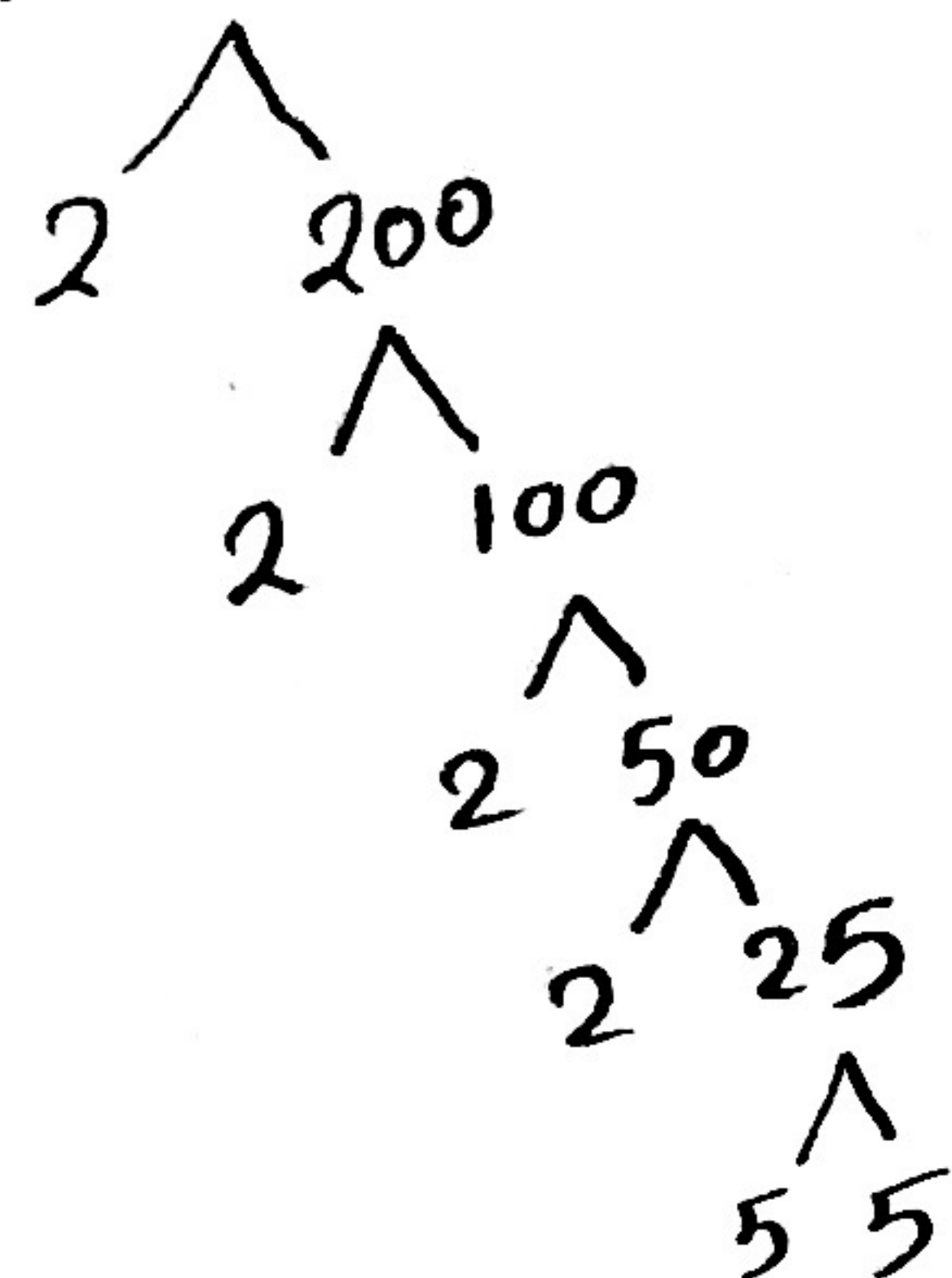
Recognising Perfect Squares

GOAL

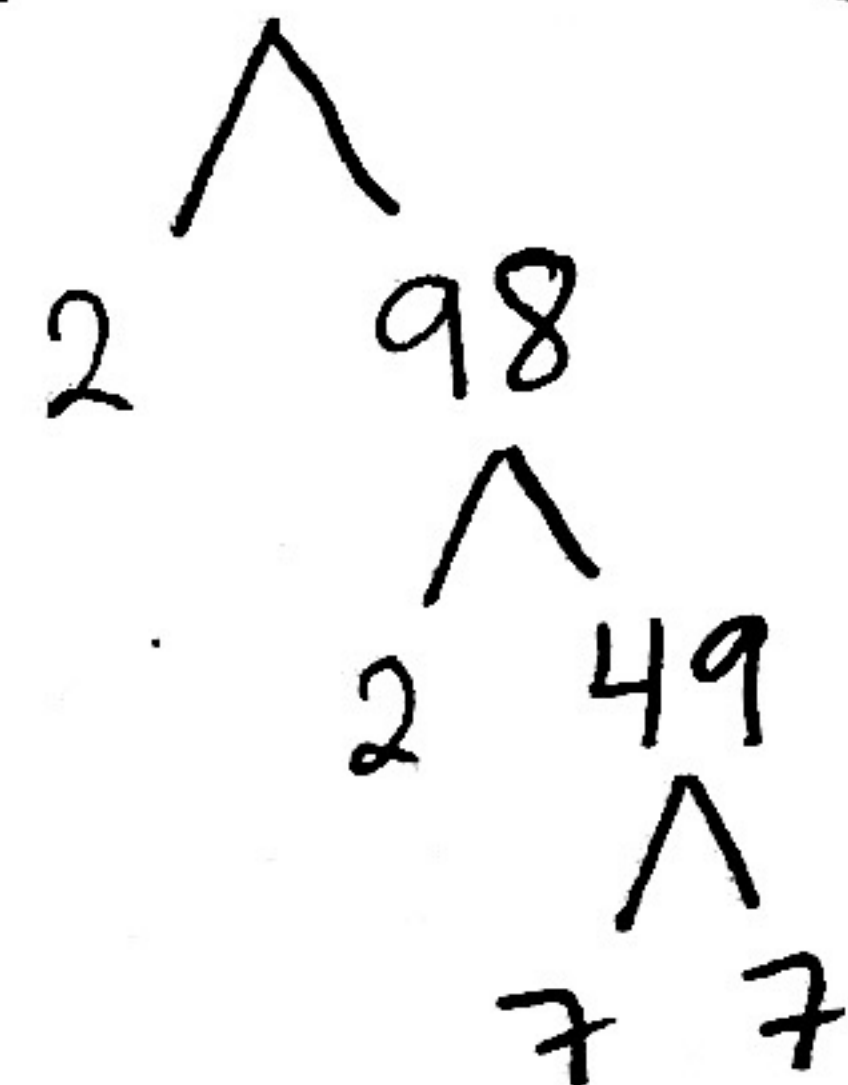
Use a variety of strategies to identify perfect squares.

1. Use a tree diagram to express each number as the product of two identical numbers.

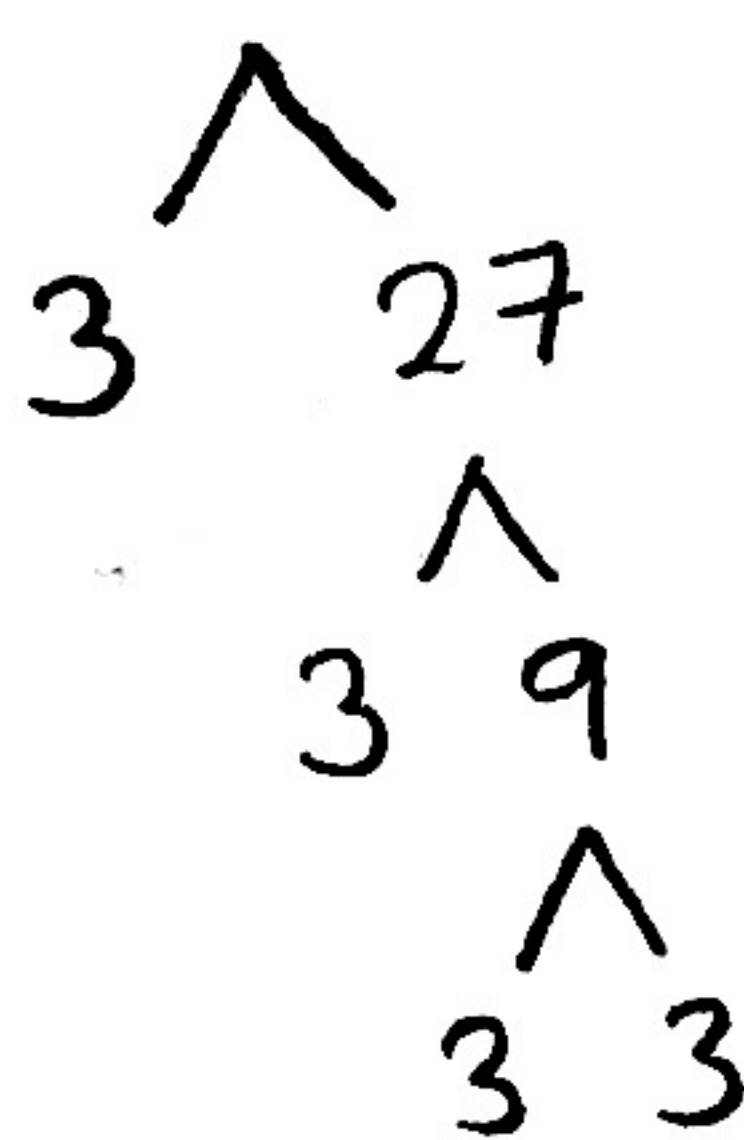
a) 400



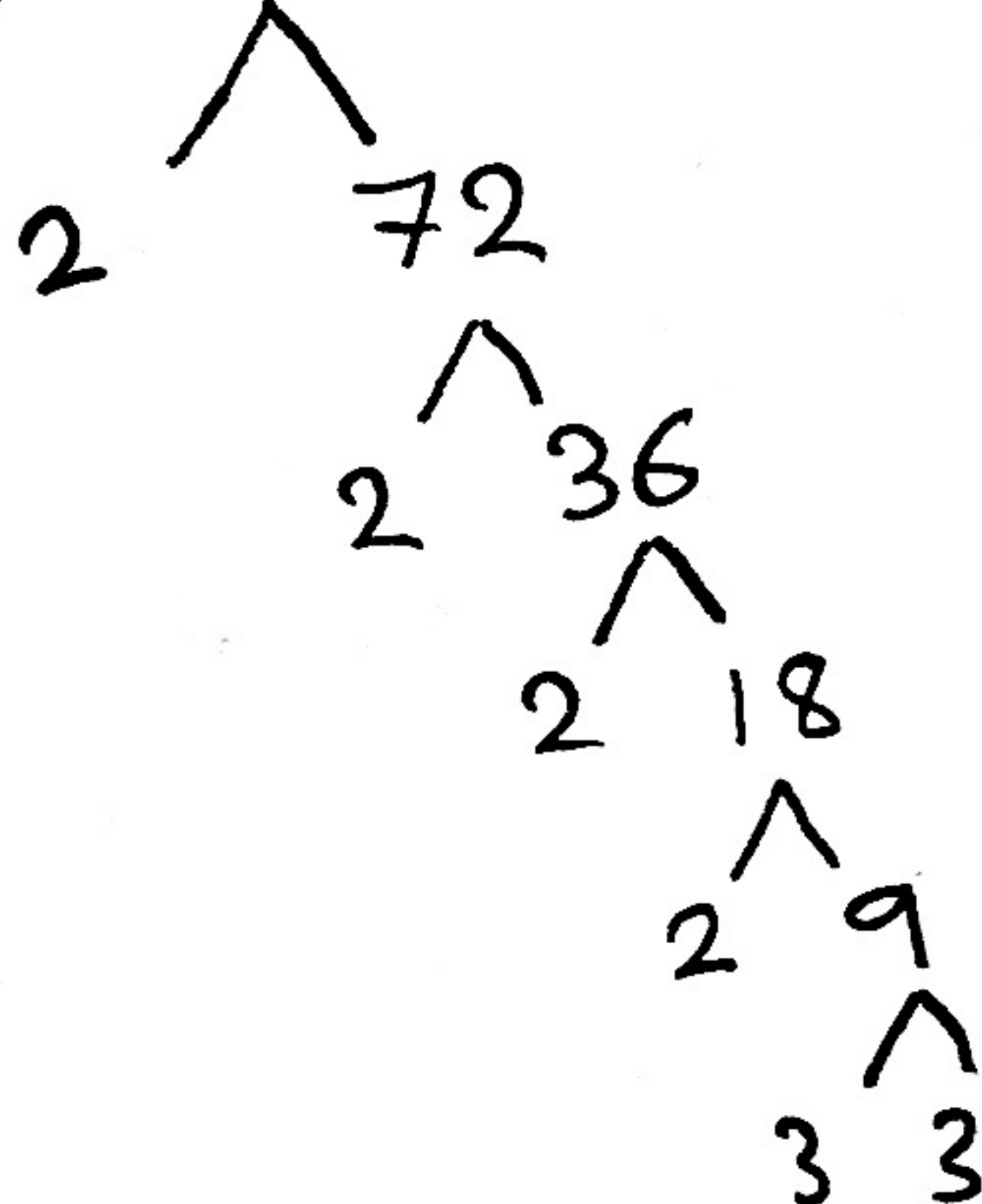
b) 196



c) 81



d) 144



At-Home Help

The product of two identical numbers is a perfect square.

You can use a tree diagram to determine if a number is a perfect square.

For example, is 225 a perfect square?

225

5 45

5 9

3 3

$$\begin{aligned} 225 &= 5 \times 5 \times 3 \times 3 \\ &= (5 \times 3) \times (5 \times 3) \\ &= 15 \times 15 \end{aligned}$$

Yes, 225 is a perfect square.

2. Calculate.

a) 10^2
100

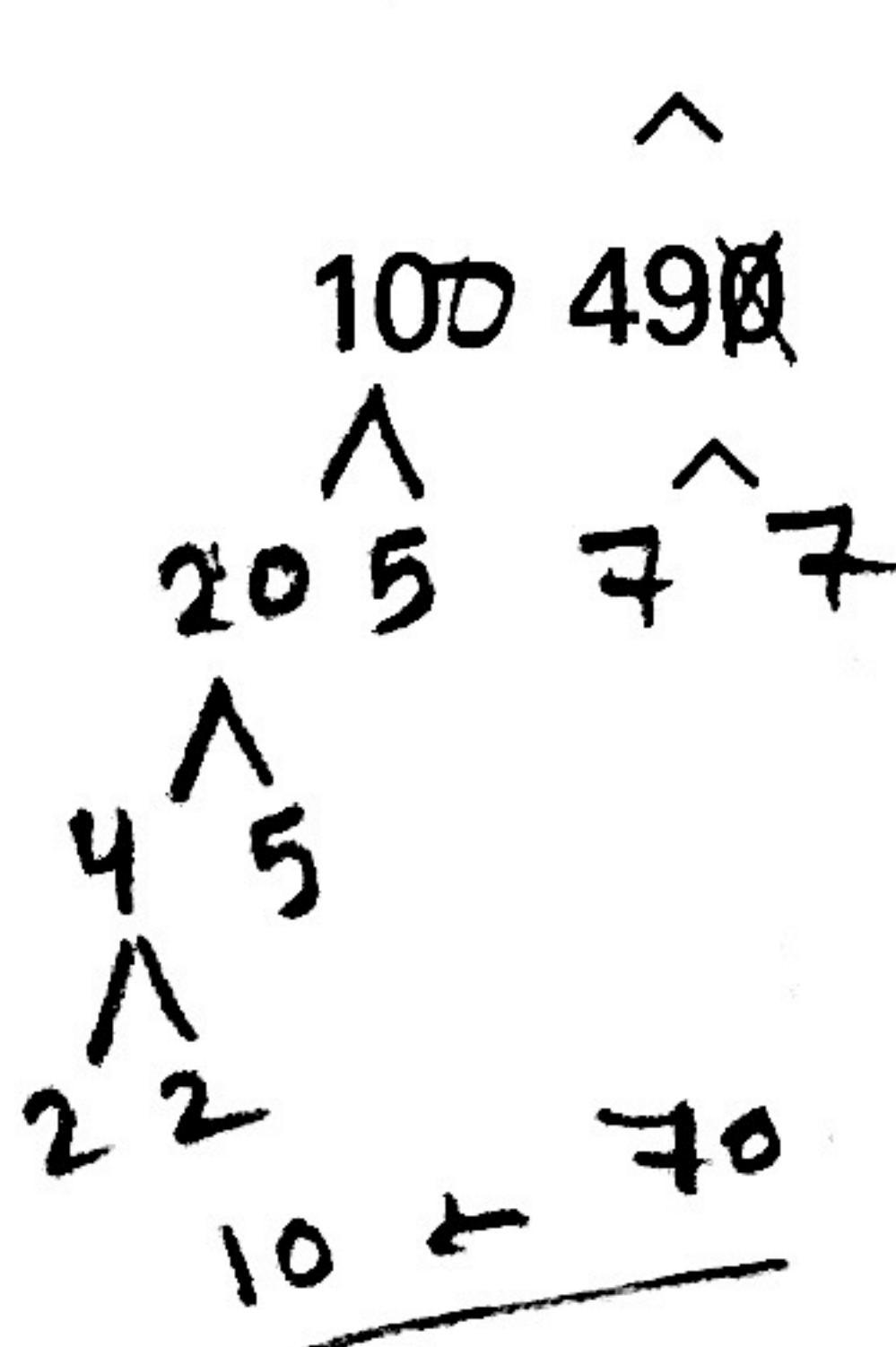
b) 16^2
256

c) 18^2
324

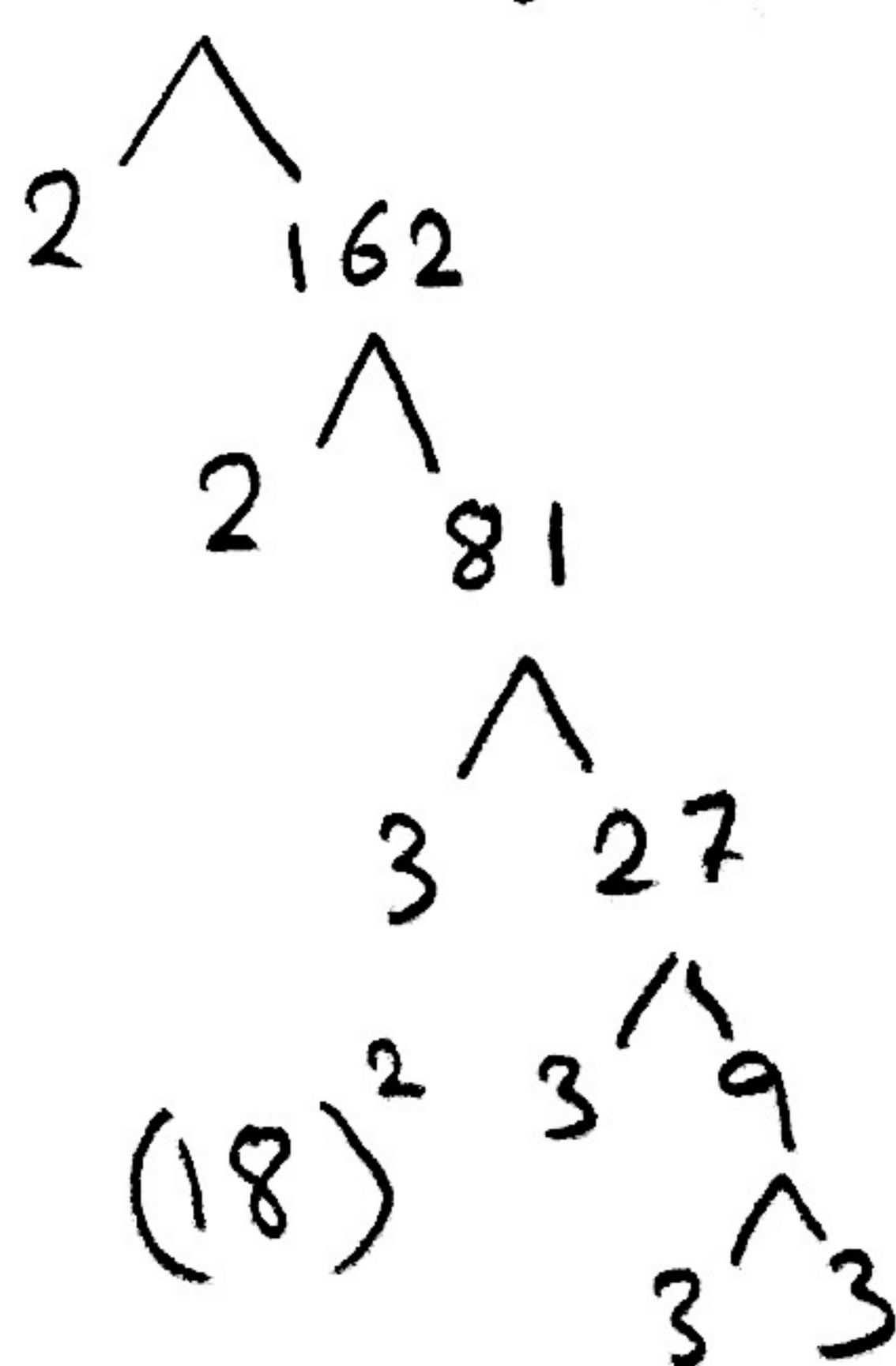
d) 21^2
441

3. Express each number as a perfect square and write the final answer in the form $\square^2$. Use a tree diagram to determine the factors.

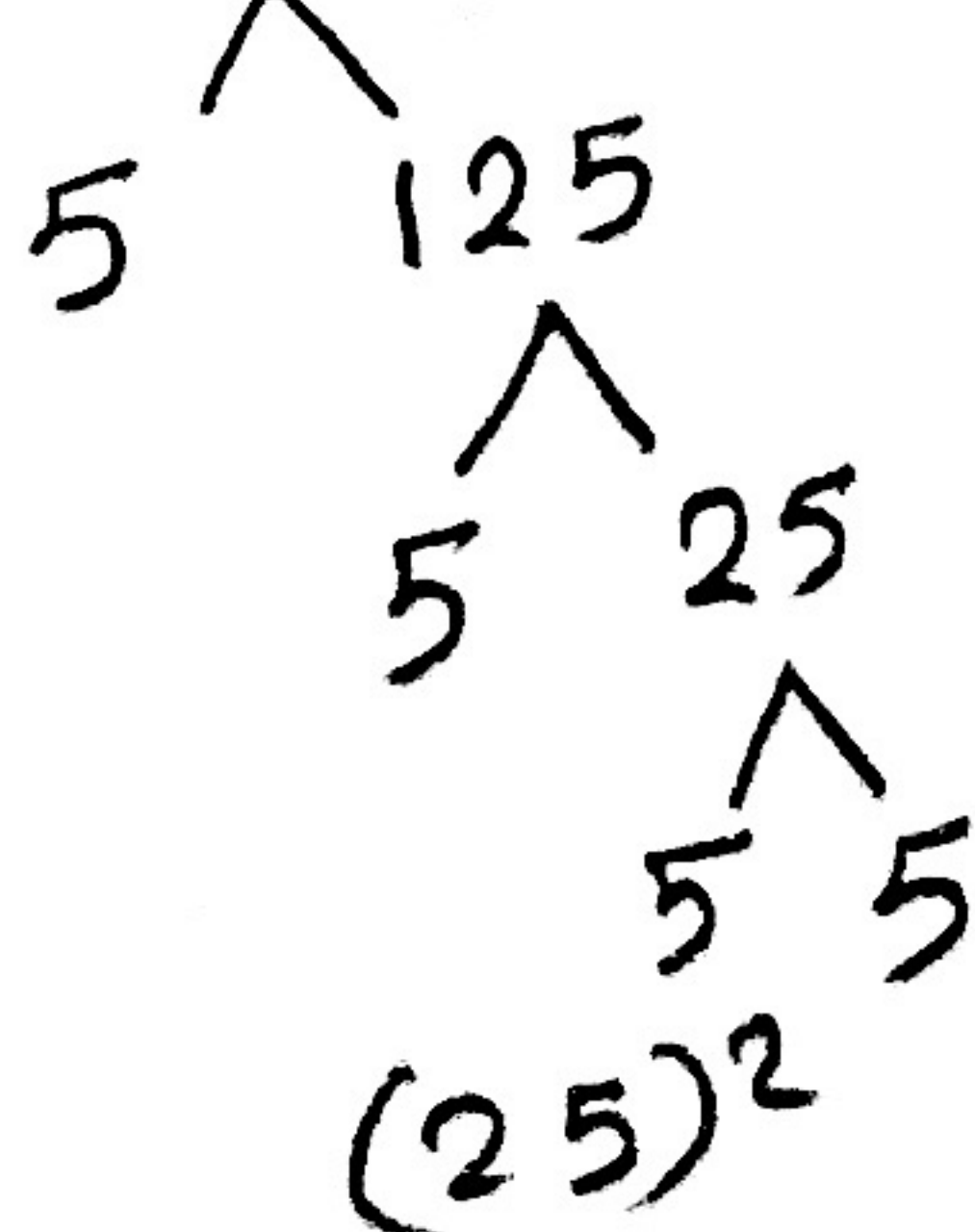
a) 4900



b) 324



c) 625



d) 576

