

Daniel & Jakey

Me and my friend first worked out no.1 was $\frac{1}{8}$ of the whole shape and then we worked out no.2 and realized it was half of no.1 so $\frac{1}{16}$. We then realized 2 no.1s is $\frac{1}{4}$ of the whole shape .So no.3 add no.3 must equal $\frac{1}{4}$ so no.3 had to be $\frac{3}{16}$ because $\frac{3}{16} + \frac{1}{16} = \frac{4}{16}$ which is $\frac{1}{4}$. Next we figured out that no.4 is half of no.1 so $\frac{1}{16}$ then we noticed that no.8 is half of no.1 so $\frac{1}{32}$ so no.7 and no.8 must add up to $\frac{1}{8}$ because it is then the same shape as no.1. So no.7 had to be $\frac{15}{32}$, we found out that no.5 is no.1 split in half and then stacked on top of each other so no.5 was $\frac{1}{8}$ so no.6 is half of no.5 so $\frac{1}{16}$, that means no.9 is half of no.6 so no.9 is $\frac{1}{32}$ which means that no.10 is half of no.9 so $\frac{1}{64}$. thank you for reading our solution :)

Keegan and Kieron

Well we looked at 1 and noticed that 2 & 3 = $\frac{1}{8}$ together and 1 was half of that so it = $\frac{1}{8}$. Then we looked at two and noticed it was half of 1 making $\frac{1}{16}$. When we looked at 3 it was one and two's size together making $\frac{3}{16}$. Then we looked at 4 and noticed that if we split it in half we could make $\frac{1}{2}$ of $\frac{1}{8}$ making $\frac{1}{16}$. 5 is $\frac{1}{8}$ because it is half of one. We realized that 6 is half of 5 making $\frac{1}{16}$. 7 is 4 add half of 4 making $\frac{3}{32}$. 8 is half of 4 making $\frac{1}{32}$. 9 is half of 6 making $\frac{1}{32}$. 10 is half of 9 making it $\frac{1}{64}$. Simple! :)

Sam, Ben and Dan

1. We began by looking at the number 1 the rectangle and it was $\frac{1}{8}$ by halving it and halving it into quarters which was $\frac{1}{8}$.
2. We then went on to number 2 and saw it was half of $\frac{1}{8}$ which is $\frac{1}{16}$.
3. Then we went on to number 3 and saw it was $\frac{1}{8}$ add $\frac{1}{16}$ which is $\frac{3}{16}$.
4. We saw it was the same as 2 because it had the same area as 4 but you may not think that because there is a triangle but it is.
5. We figured out that number 5 was $\frac{1}{8}$ because it was the same area as number 1.
6. We know that 6 is half of number 5 so it must equal $\frac{1}{16}$. We carried on using this kind of thinking.

Callum, Oliver

1. We knew that one was half as big as $\frac{1}{4}$.
2. We knew that two was half as big as one.
3. Three was three times as big two.
4. We knew that four was half as big as an $\frac{1}{8}$.
5. Five was half as big as a $\frac{1}{4}$.

6. We knew that six was half as big as five.
7. We knew that seven was three times bigger than eight.
8. We knew that eight was three times smaller than seven.
9. We knew that nine was four times smaller than five.
10. We knew that ten was half as big as nine.

Jess and Ruby

For number 1 we knew that the blue bit was half of a $\frac{1}{4}$ and we know that, that is an $\frac{1}{8}$.

For number 2 we knew that 2 was half of 1 so we doubled 1 so 2 is $\frac{1}{16}$.

For number 3 we knew that 3 was 1 and 2 together so we did it the same as number 1 but added a third and we got $\frac{1}{6}$.

For number 4 we knew that if you split shape in half of the rectangle so then we knew that it was $\frac{1}{8}$ of the $\frac{1}{4}$ so that makes it $\frac{1}{16}$ of the shape.

For number 5 we knew that it was $\frac{1}{2}$ of $\frac{1}{4}$ so then we knew that it was $\frac{1}{8}$

For number 6 we knew 6 was half of 1 so we doubled 1. we carried on using what we new to do the rest.

Pat and Tom

First we found number one by knowing there was 4 of them in half of the whole thing so there were 8 in the entire rectangle so 1 equals $\frac{1}{8}$. we found number 2 by knowing it was a half of number one so it was $\frac{1}{16}$. We found number 3 because it was 3 times as big as number 2 so the answer was $\frac{3}{16}$. Number 4 was a bit harder but in the end we got $\frac{1}{16}$ because the white triangles next to it is the same area as the green triangle, and the green plus the white triangle next to it was the same area as number 1. So the answer was half of number 1 which is $\frac{1}{16}$. Number 5 was quite easy because it was the same area as number one. So the answer was $\frac{1}{8}$. Number 6 was easy as well because if you draw a line from the left bottom corner of number 6 across number 5 you can see that number 6 is half of number 5 so the answer is $\frac{1}{16}$. to do number 7 you needed to work out number 8 so number 8 is the same as the white triangle above. The white triangle is half of number 4 so it is $\frac{1}{32}$. we carried on working in this way. This challenge was challenging but good fun!