

Ultimate reasoning resources

**To support teachers, parents and
schools to develop communication,
talking and justification**



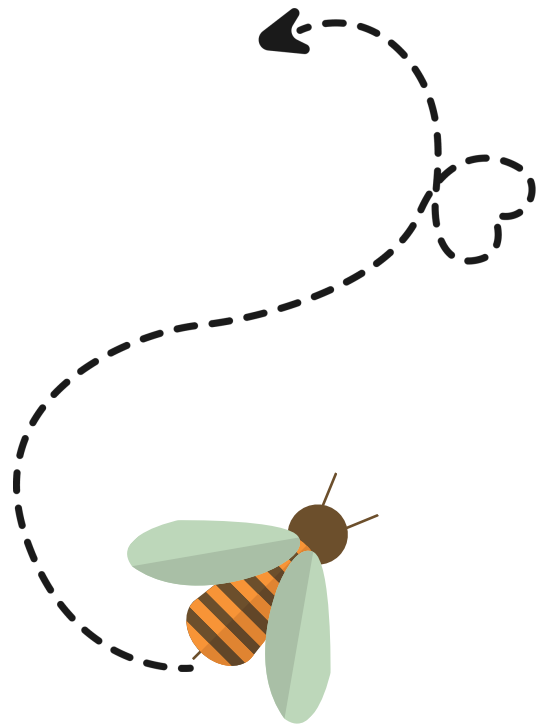
Year 5 and 6

John Bee

@mrbeeteach

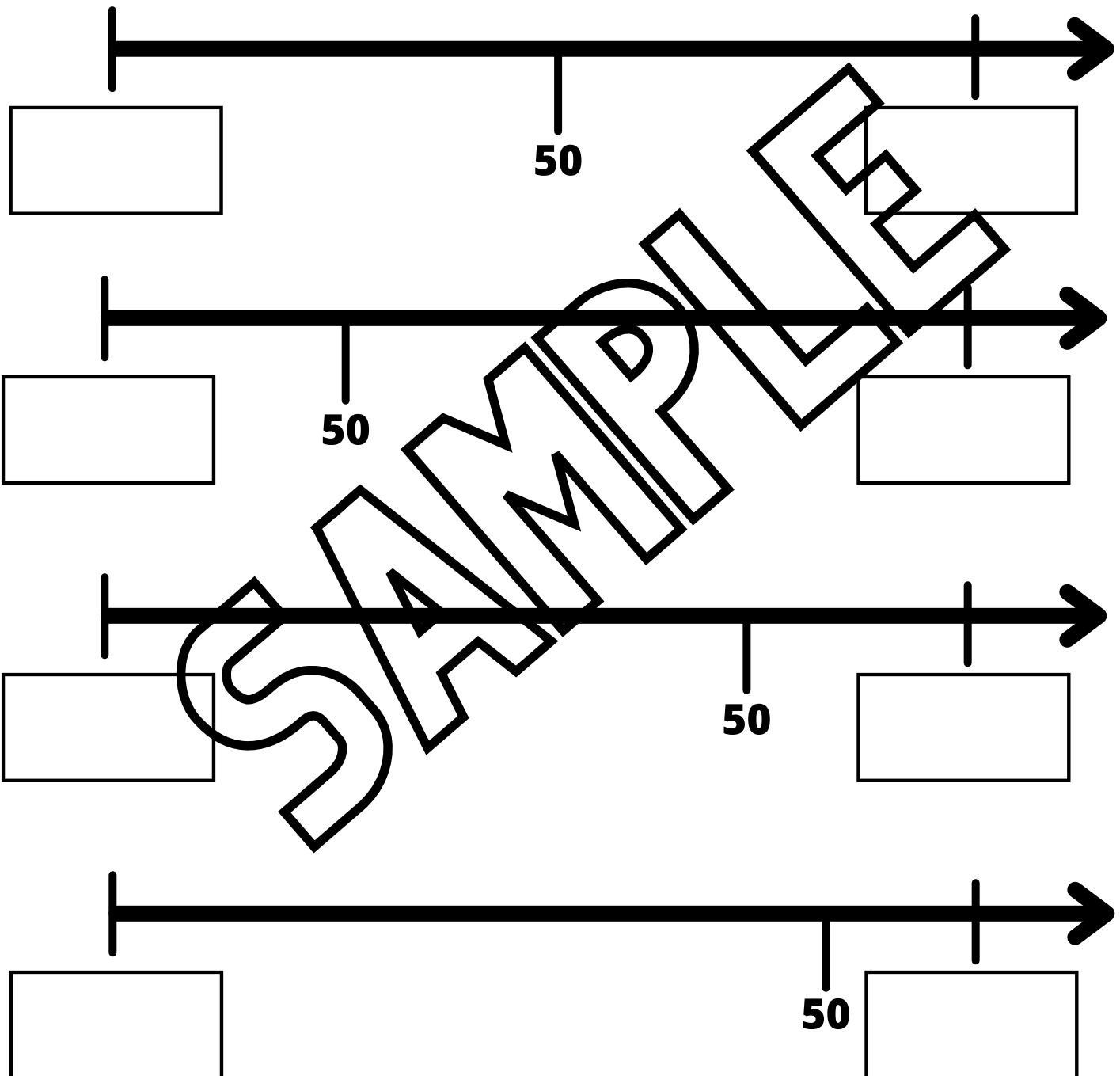
Contents

- 1. Place value**
- 2. Addition and subtraction**
- 3. Multiplication and division**
- 4. Fractions**
- 5. Ratio**
- 6. Algebra**
- 7. Measures**
- 8. Geometry**
- 9. Statistics**
- 10. Riddles**



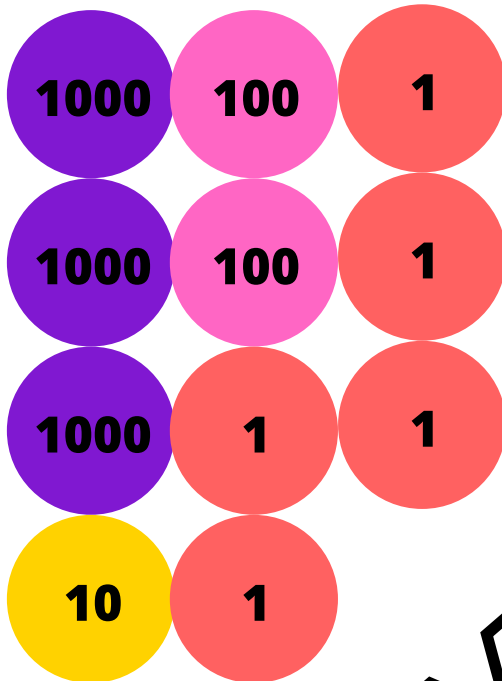


What could the missing numbers be?

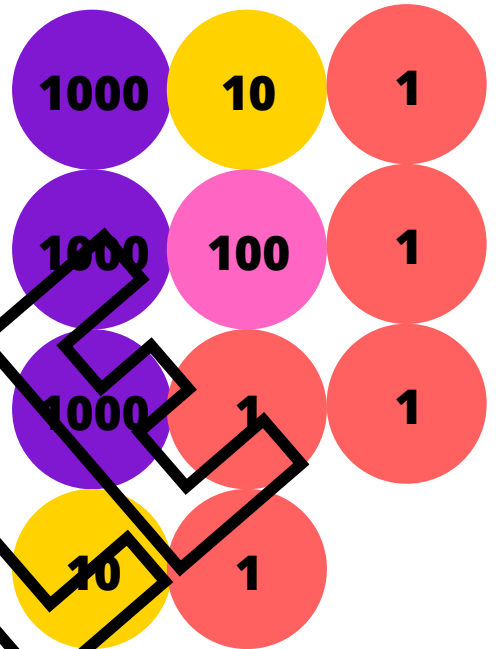




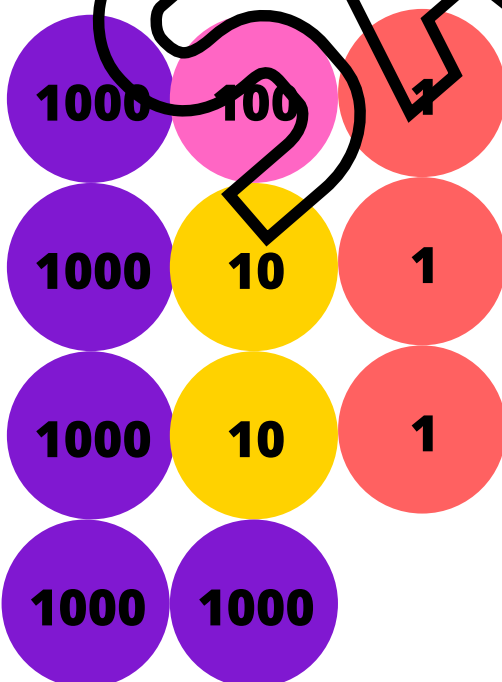
Which one?



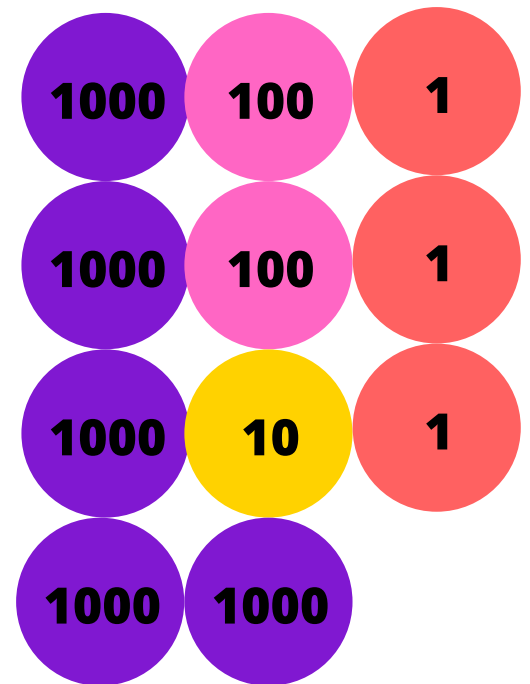
3215

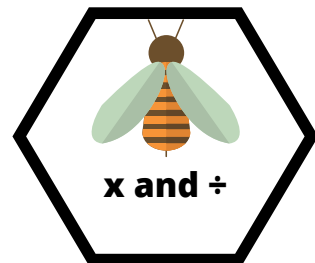


Which one?



5213





Missing digits

$$\square \quad 2 \quad \square$$

4 x

$$\begin{array}{r} 492 \\ \hline \end{array}$$

Missing digits

$$\square$$

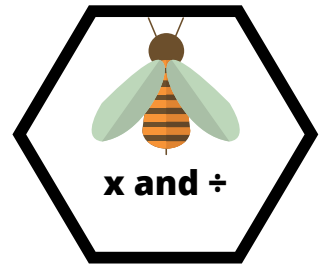
4 3

$$\square$$

x

$$\begin{array}{r} 3258 \\ \hline \end{array}$$

What are the mistakes?



101

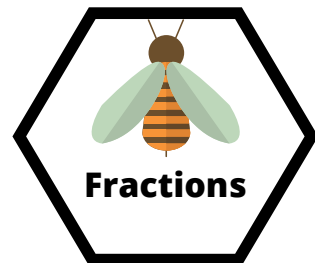
$$4 \overline{) 604}$$

150 r4

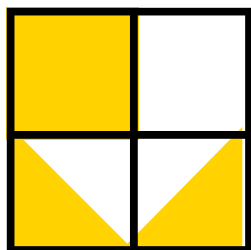
$$4 \overline{) 604}$$

152

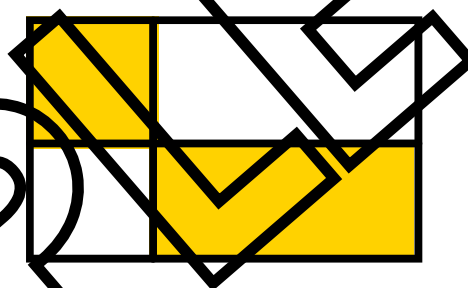
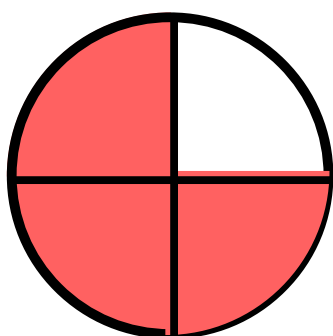
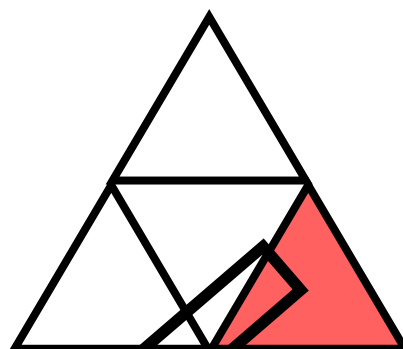
$$4 \overline{) 604}$$



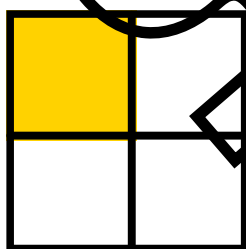
Which are equivalent?



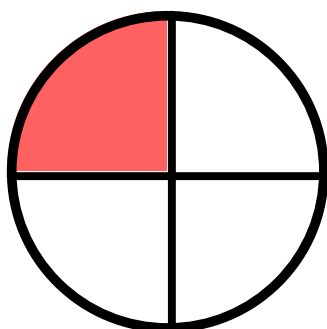
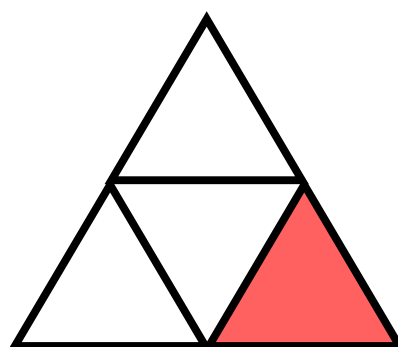
$$\frac{1}{2}$$

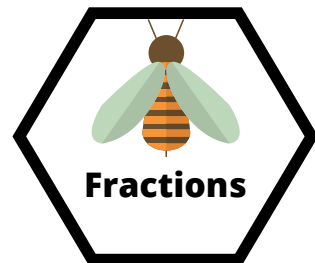


Which are equivalent?

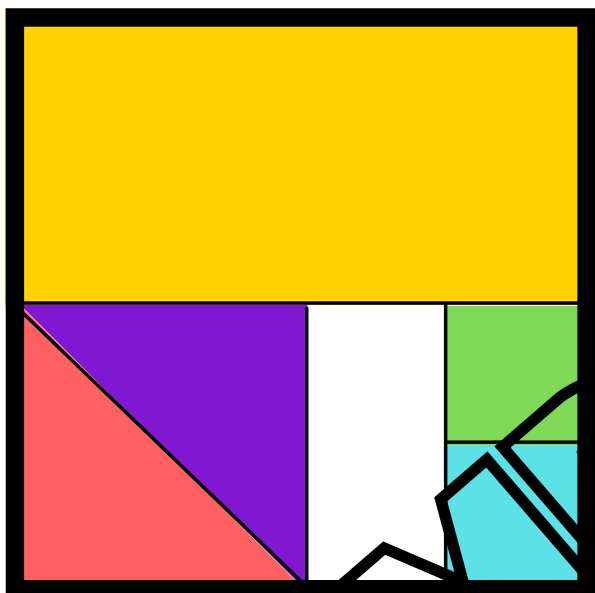


$$\frac{1}{4}$$

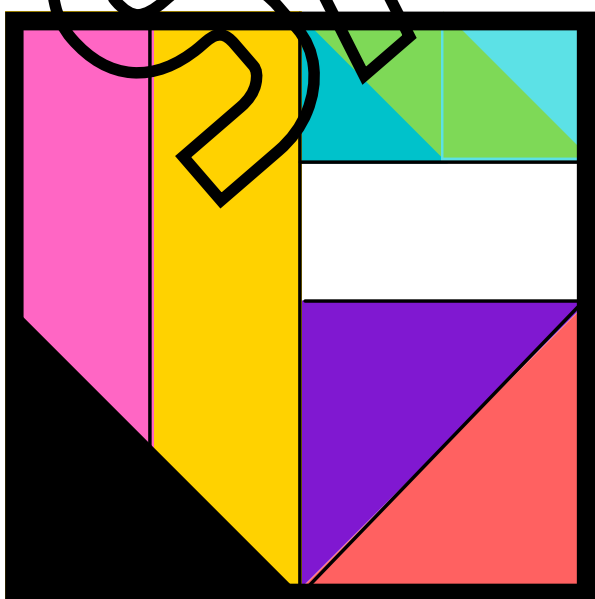


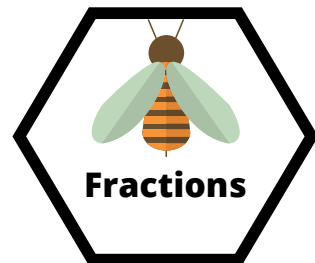


Which fractions can you spot?



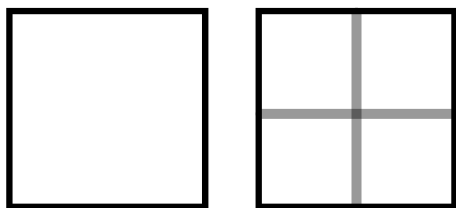
Which fractions can you spot?



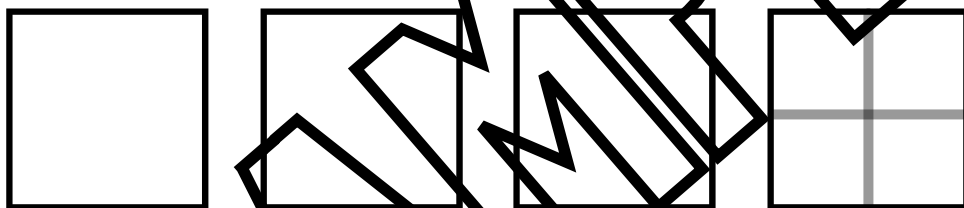


Reason

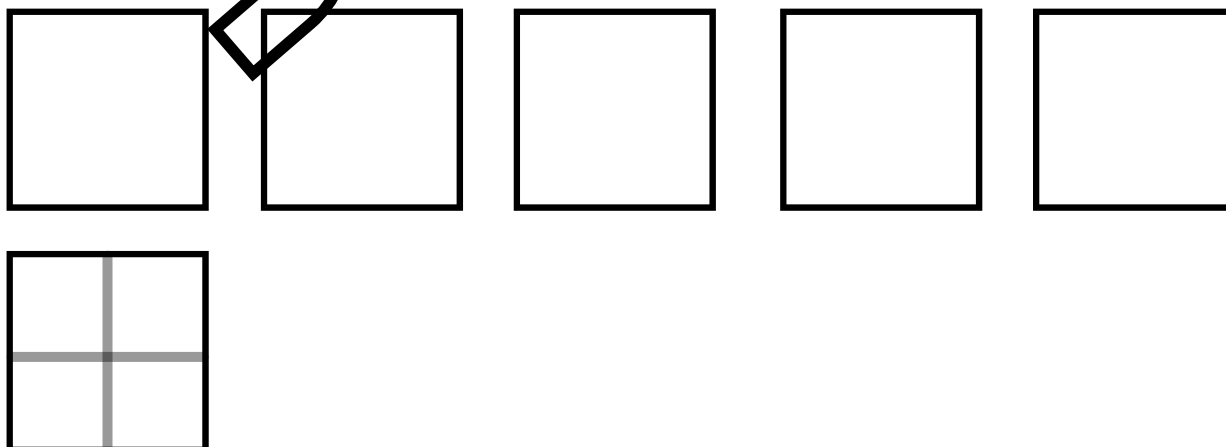
How many quarters are there in $1 \frac{1}{4}$?



How many quarters are there in $3 \frac{1}{4}$?



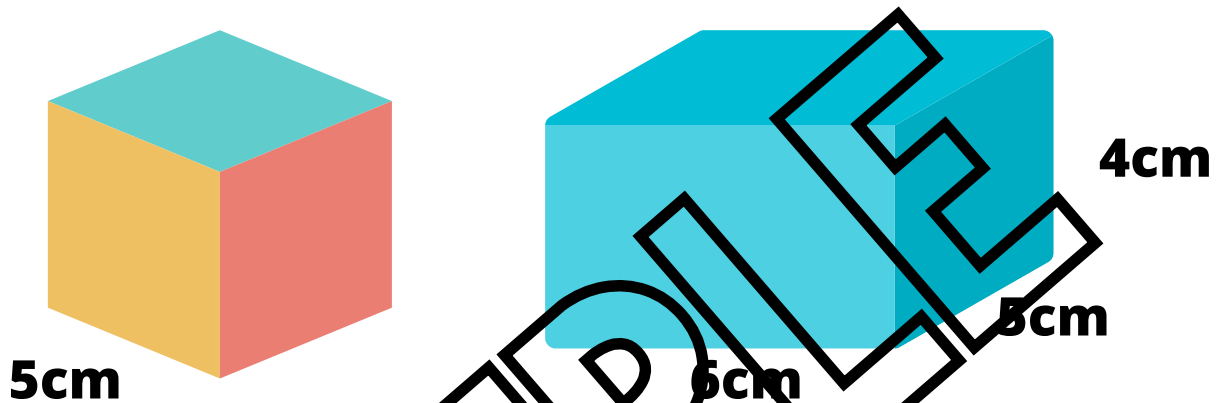
How many quarters are there in $5 \frac{3}{4}$?





Difference

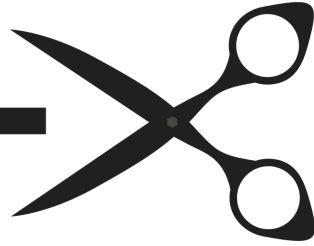
Calculate the difference in volume between the cube and cuboid.





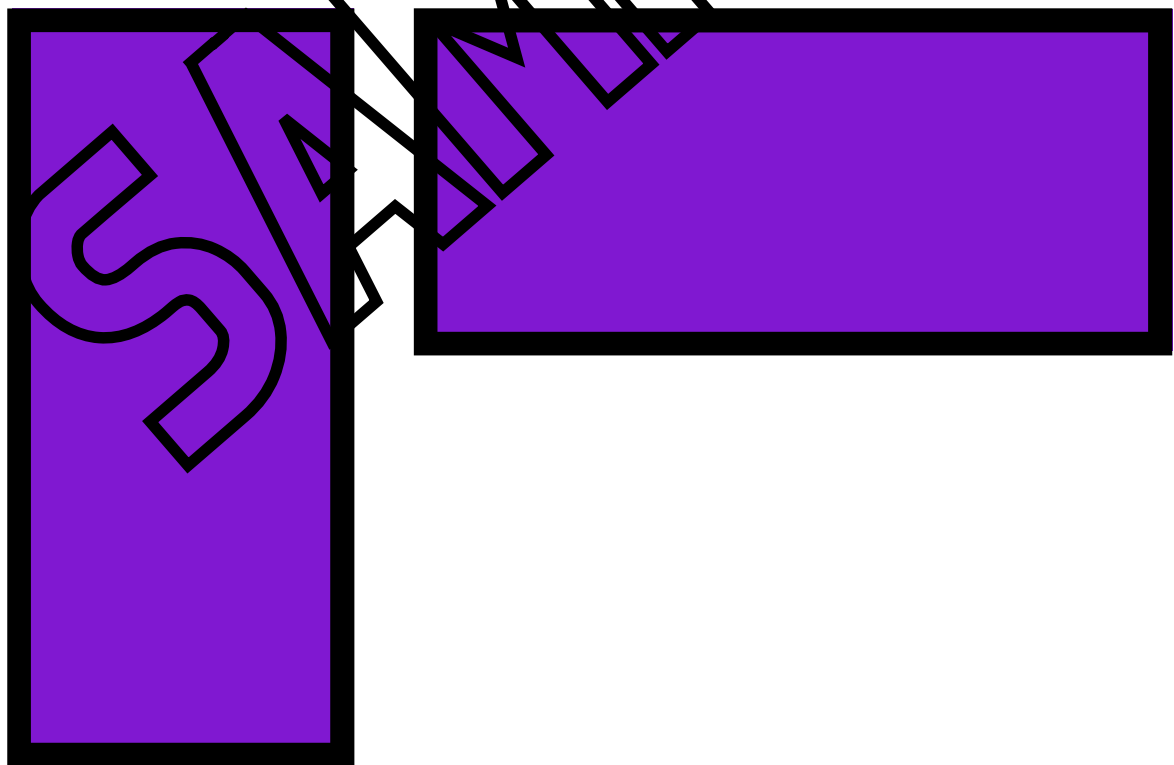
Reasoning

Here are two identical rectangles. Cut them out and measure them with a ruler.



Can you make a shape with the smallest possible perimeter?

Can you make a shape with the smallest possible area?



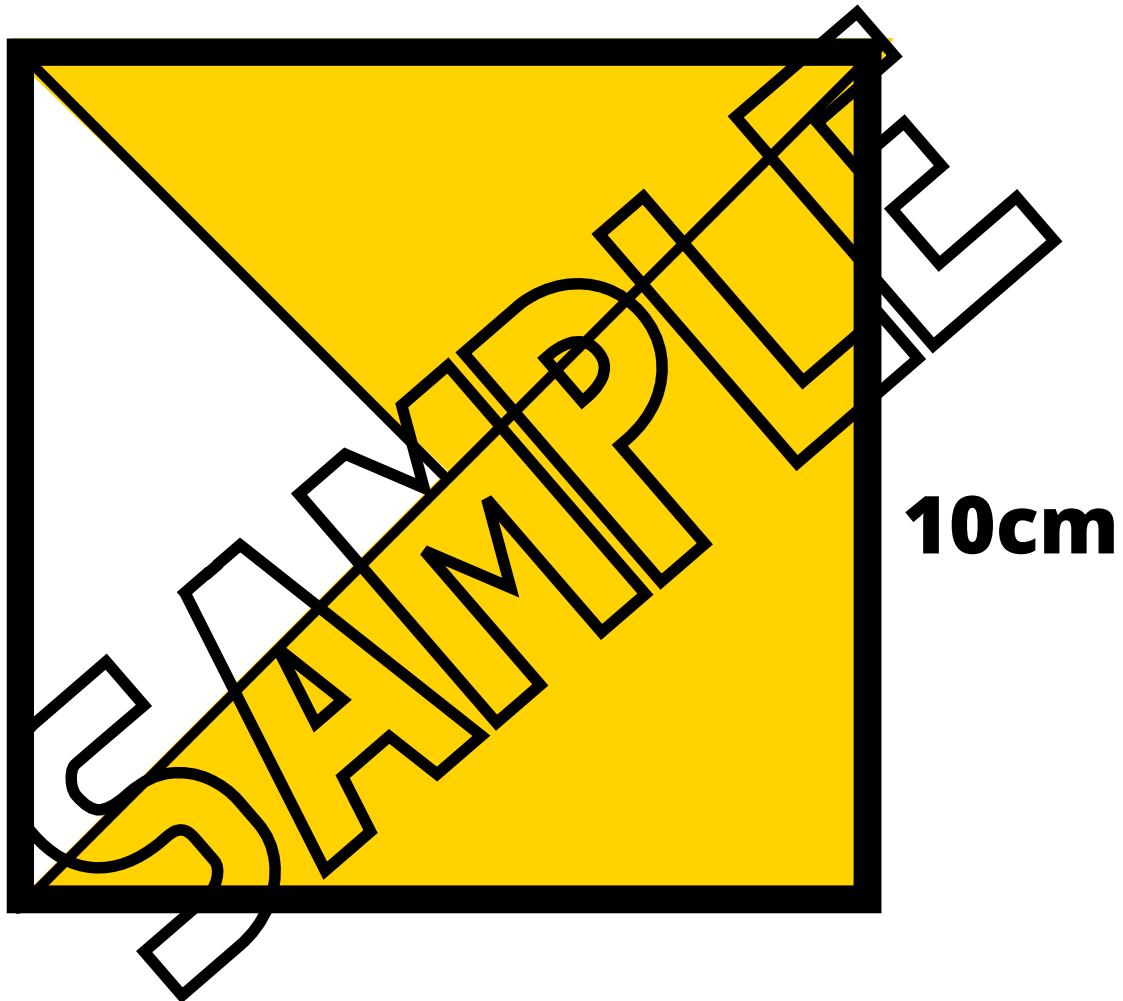


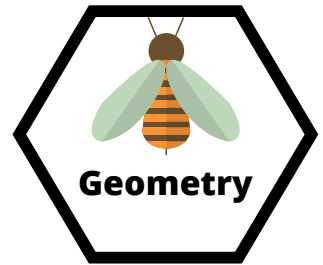
Calculate

Look at the square.

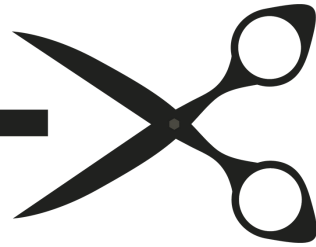
What area is yellow?

What area is white?

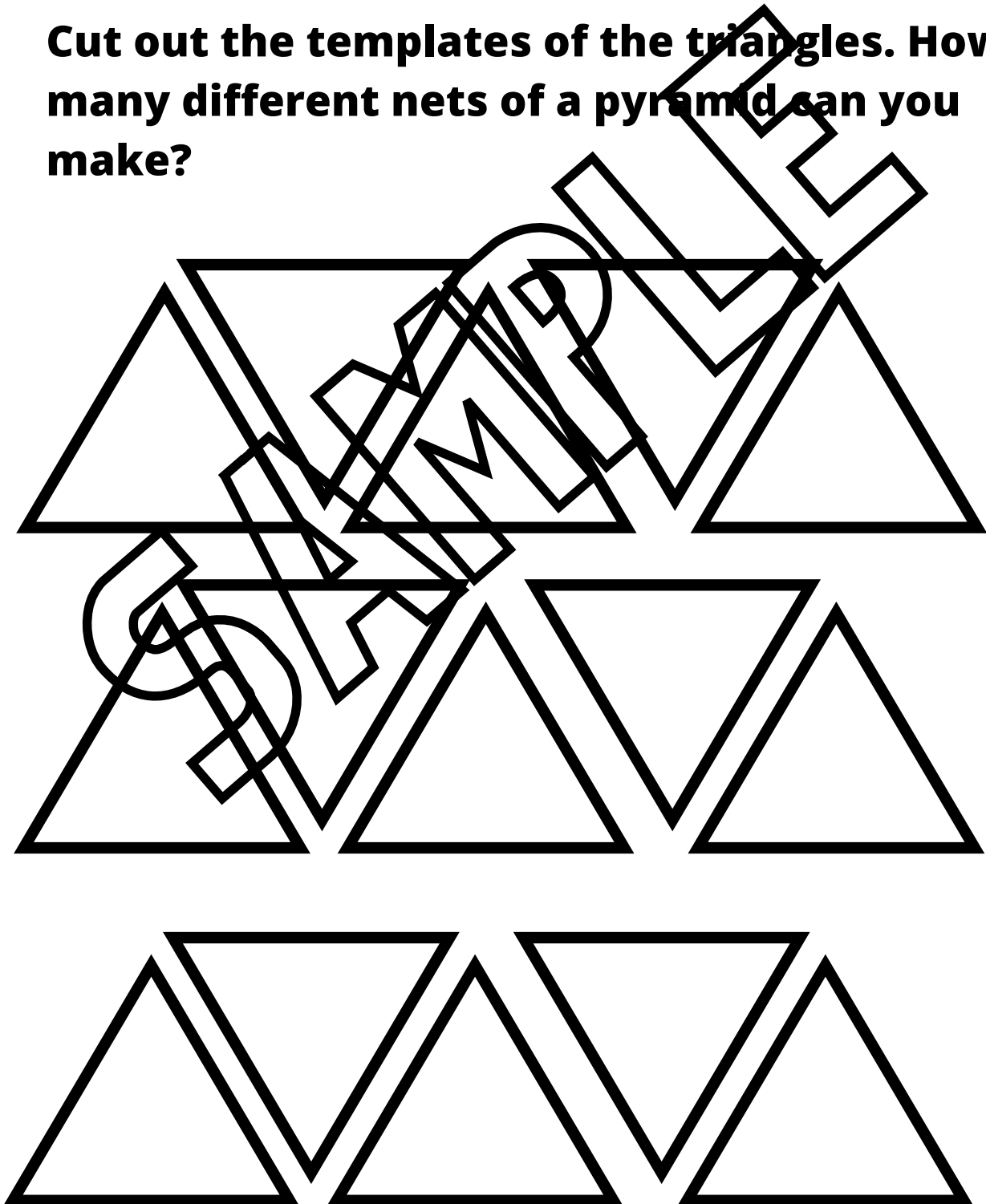


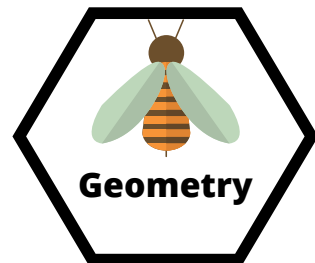


Reasoning



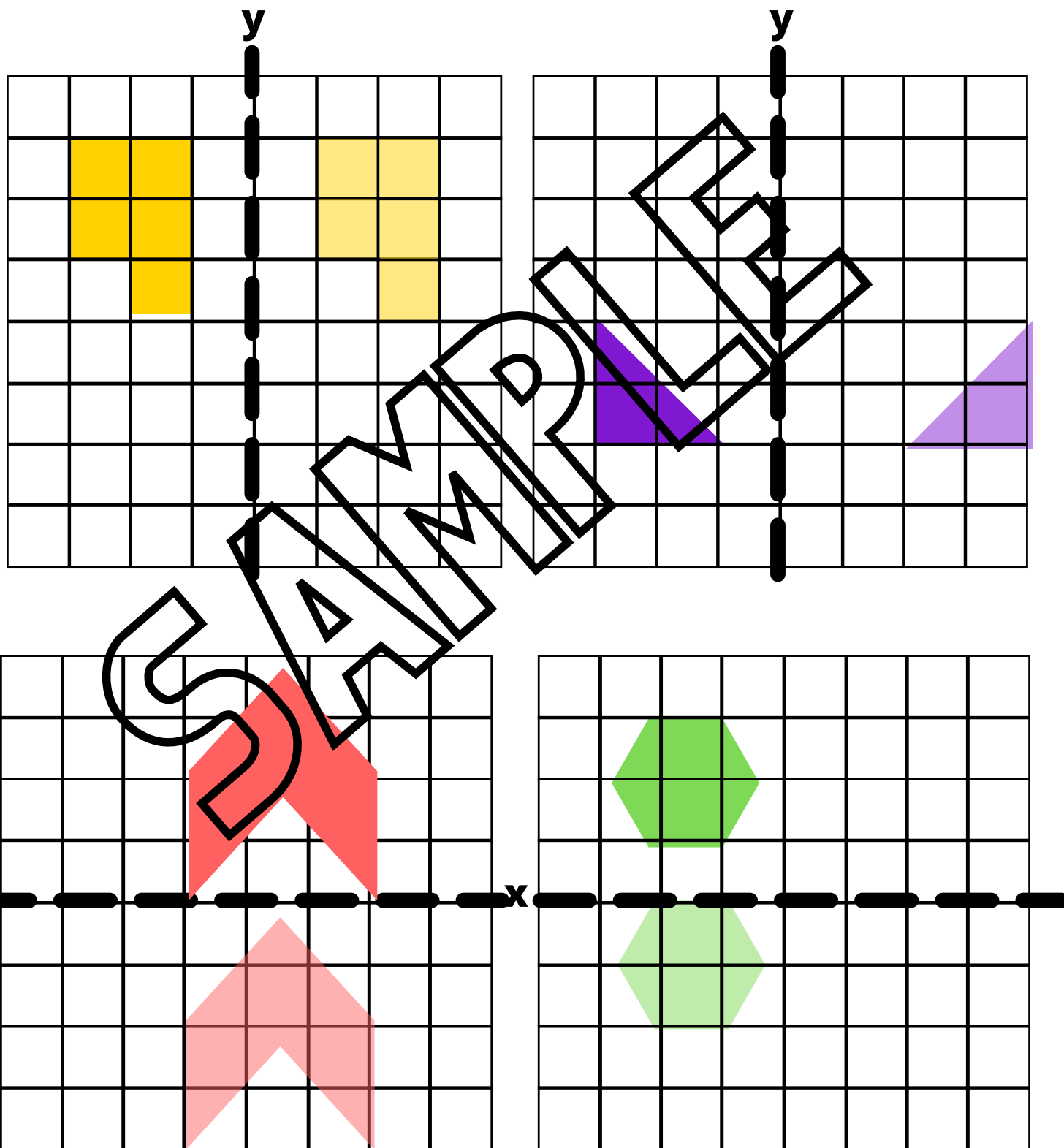
Cut out the templates of the triangles. How many different nets of a pyramid can you make?

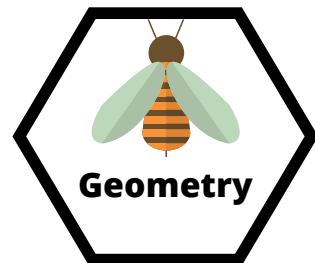




What are the mistakes?

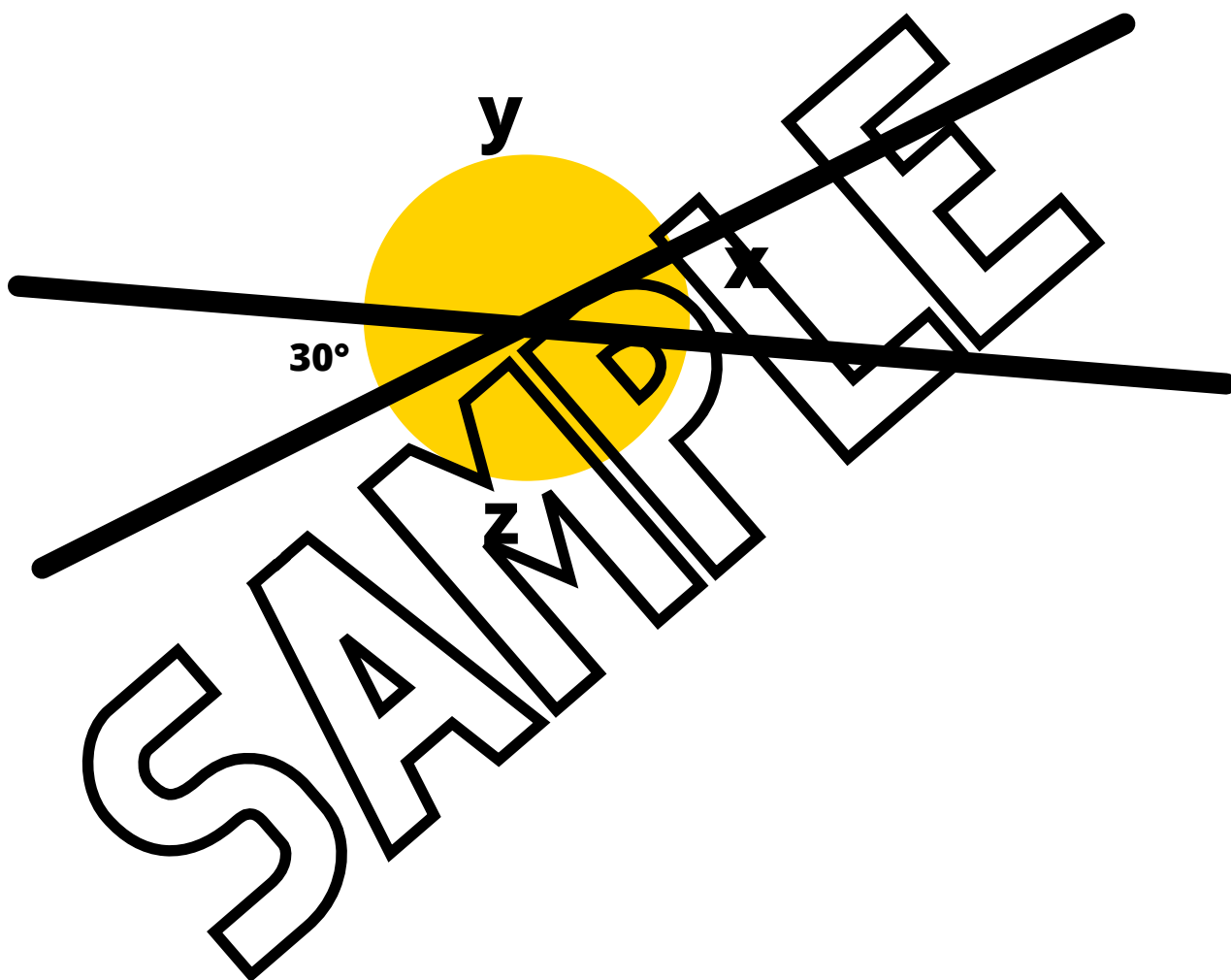
Reflect the shape on the mirror line

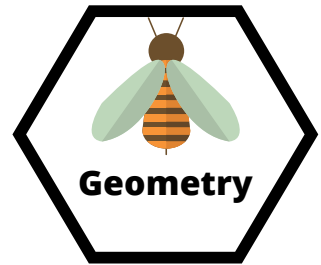




Reasoning

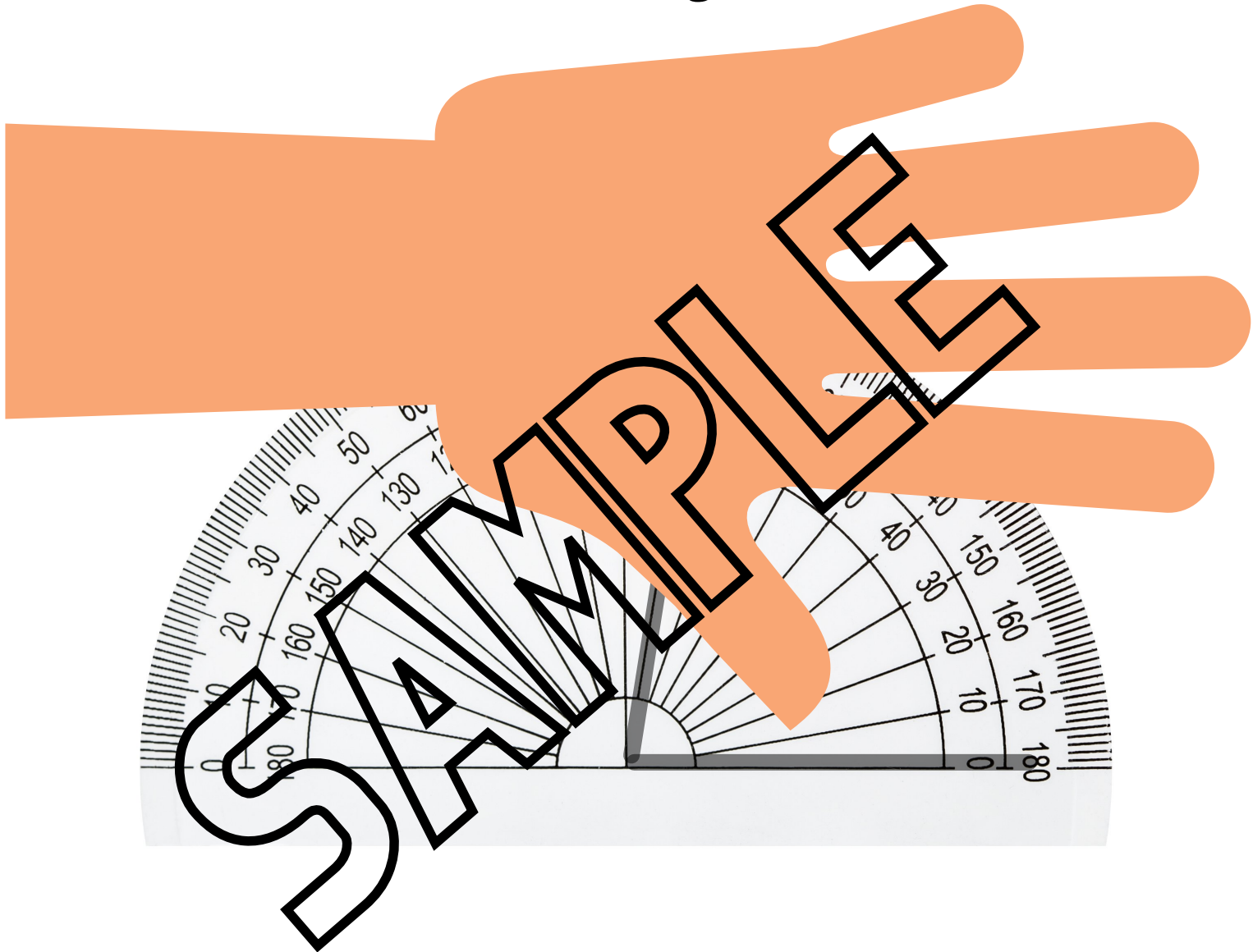
How would you calculate the size of each angle?





Estimate

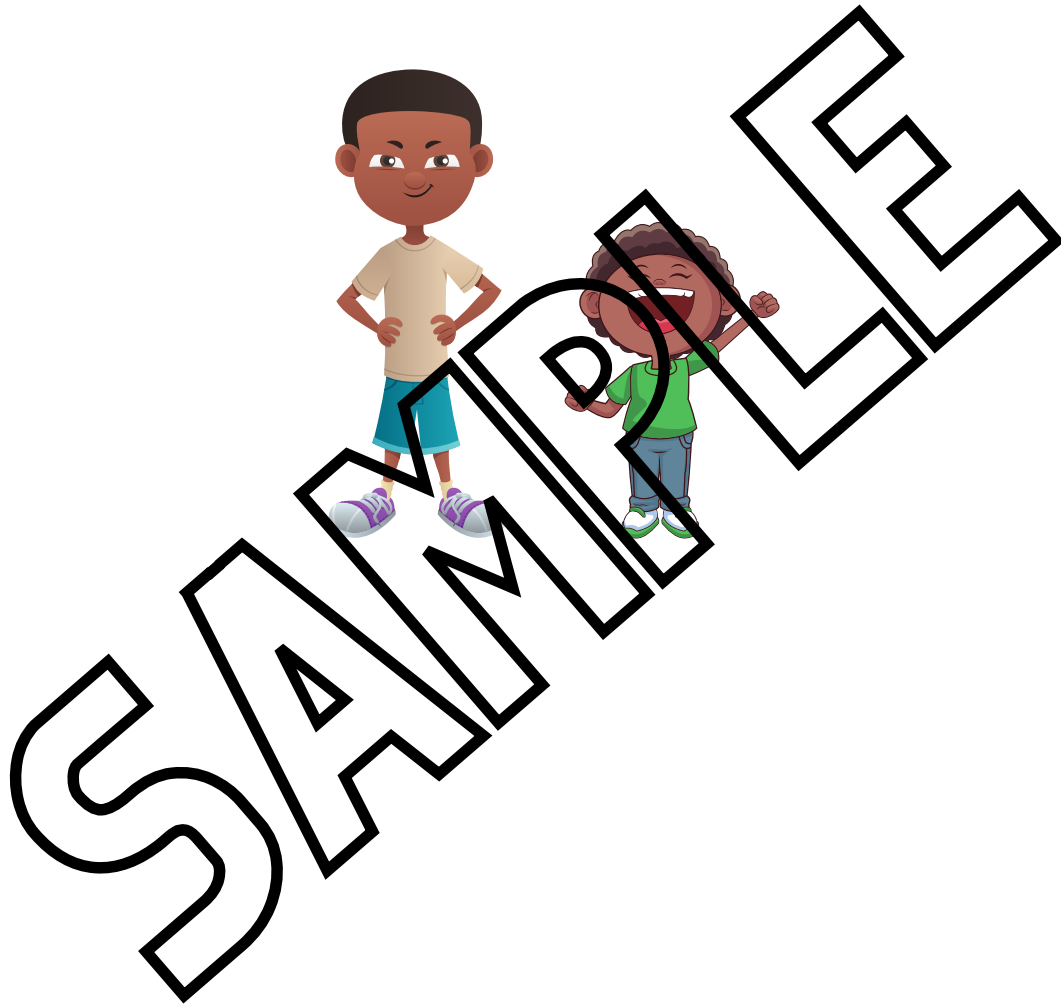
How much does the angle measure?

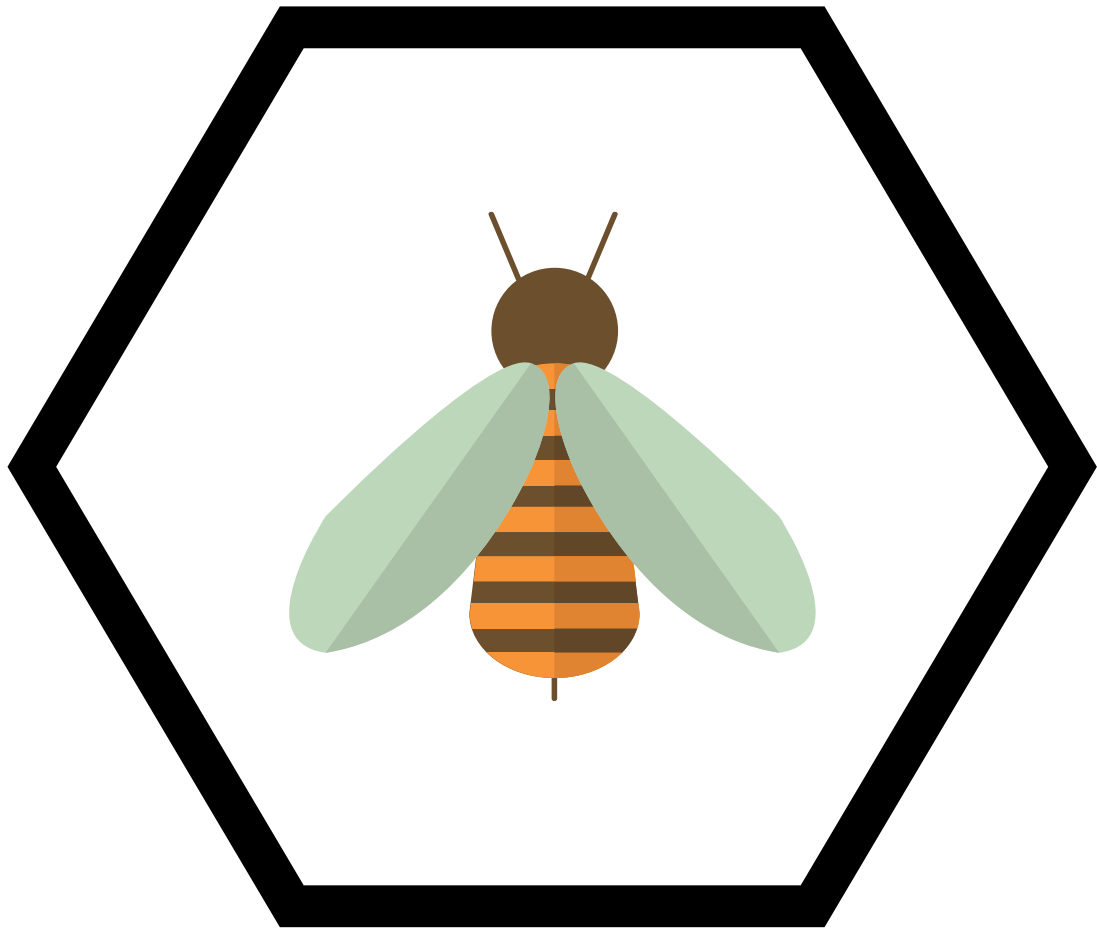




Riddle

When Sam was 6, his brother was half his age. When Sam is 60, how would will his brother be?





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