

Here are the dimensions of two rectangles with an area of 24cm^2 . They have different perimeters.

How many other possible perimeters can you find, for a rectangle with an area of 24cm^2 ?

Rectangle	Perimeter
$4\text{cm} \times 6\text{cm}$	20cm
$2\text{cm} \times 12\text{cm}$	28cm
...	...

If the side lengths are fractions it is possible to have an odd perimeter.
What other odd perimeters can you make?

Rectangle	Perimeter
$1\frac{1}{2}\text{ cm} \times 16\text{cm}$	35cm
...	...

Here are some questions to consider:

- What is the smallest perimeter you can make if the area is 24cm^2 ?
- What about the largest?
- Which perimeters in between is it possible to make?

And more generally:

- Is it possible to make a rectangle with a fractional perimeter but a whole number area?
- Is it possible to make a rectangle with a whole number perimeter but a fractional area?