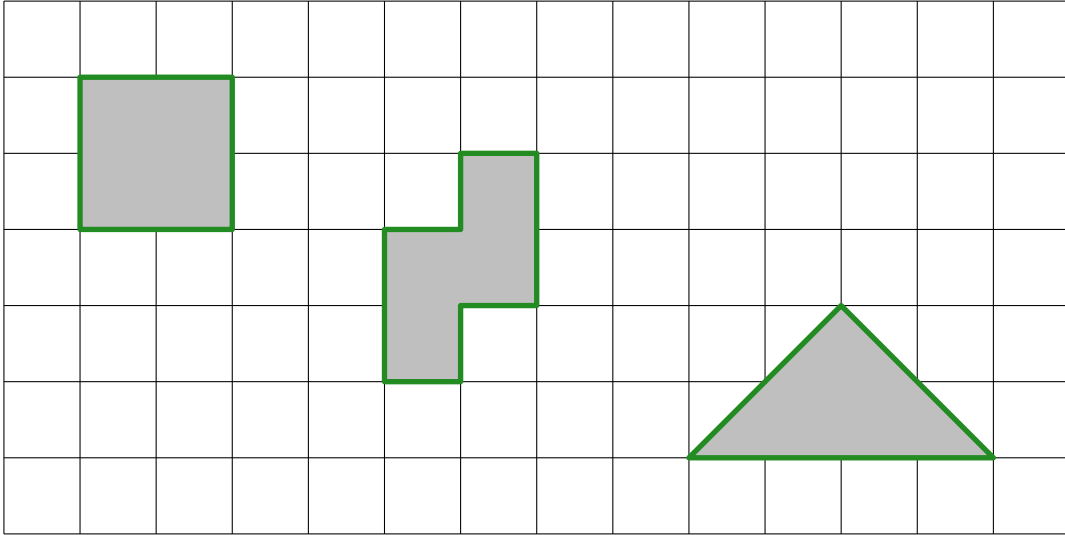
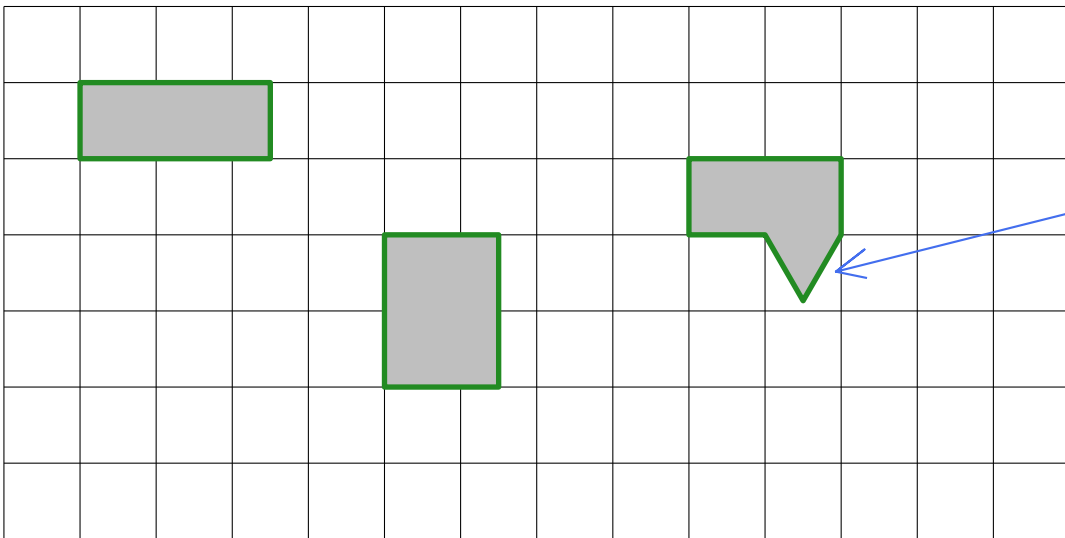


1. (a) Draw three different shapes that have an area of 4 square centimeters.



1. (b) Draw three different shapes that have a perimeter of 7 centimeters.

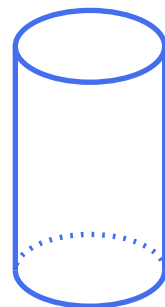


2. Describe one-dimensional, two-dimensional and three-dimensional parts or aspects of a large can of tomato juice. Give appropriate units for measurement.

1D - height of the box, diameter of the base, circumference of base (inch)

2D - base area, total surface area, area of paper that covers the side (square inch)

3D - volume of the juice, volume of the can (cubic inches, gallons)



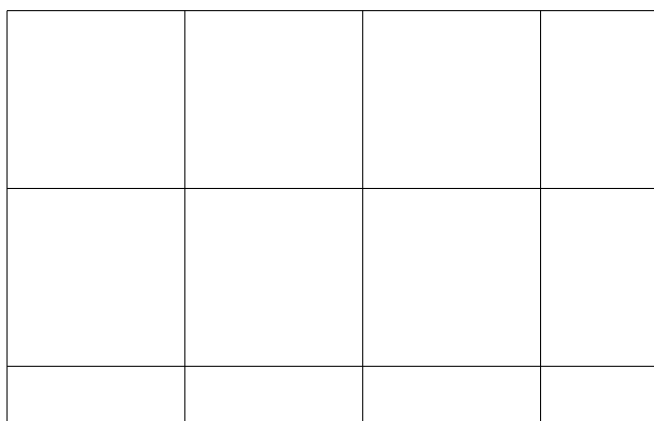
3. (a) Calculate $3\frac{2}{3} \times 2\frac{1}{3}$ without a calculator, using grouping method for multiplication.

Recall that the product $m \times n$ corresponds to adding m copies of n . In our case we need to add $3\frac{2}{3}$ copies of $2\frac{1}{3}$:

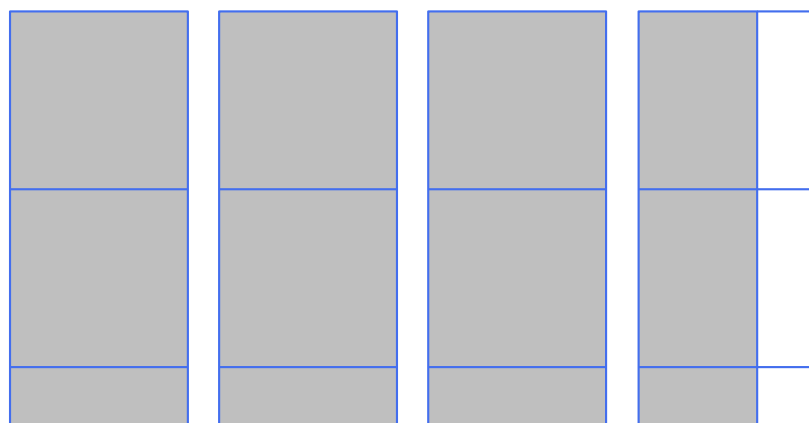
$$2\frac{1}{3} + 2\frac{1}{3} + 2\frac{1}{3} + \frac{2}{3}(2\frac{1}{3}) = 7 + \frac{4}{3} + \frac{2}{9} = 8\frac{5}{9}.$$

$$\text{Verification: } 3\frac{2}{3} \times 2\frac{1}{3} = \frac{11}{3} \times \frac{7}{3} = \frac{77}{9} = 8\frac{5}{9}.$$

3. (b) Explain why the product above corresponds to the area of the following box:



A box of width $3\frac{2}{3}$ and height $2\frac{1}{3}$



Think of each column as a group, there are $3\frac{2}{3}$ columns, and each column has $2\frac{1}{3}$ squares in it. Each column has area $2\frac{1}{3}$. So the total area is given by $3\frac{2}{3} \times 2\frac{1}{3}$, same product as in part (a).