

1. Remove parentheses and simplify:

a). $(2x - 4) : 4 + \left(\frac{1}{2}x + \frac{2}{3} \right) \cdot 3 =$ _____

b). $\left(\frac{3}{4} - x \right) \cdot 2 + \left(x + \frac{1}{6} \right) \cdot 3 =$ _____

2. Multiply:

$1 \times 1 =$ $1 \times (-1) =$ $(-1) \times 1 =$ $(-1) \times (-1) =$

$3 \times 5 =$ $3 \times (-5) =$ $(-3) \times 5 =$ $(-3) \times (-5) =$

3. Solve the equations:

$$\frac{2}{5}x = \frac{1}{15}$$

$$\frac{1}{3}x + \frac{1}{3} = \frac{1}{2}$$

$$\frac{5}{16} - \frac{y}{5} = \frac{1}{4}$$

5. Cross out the equations that are impossible to solve, and solve the rest:

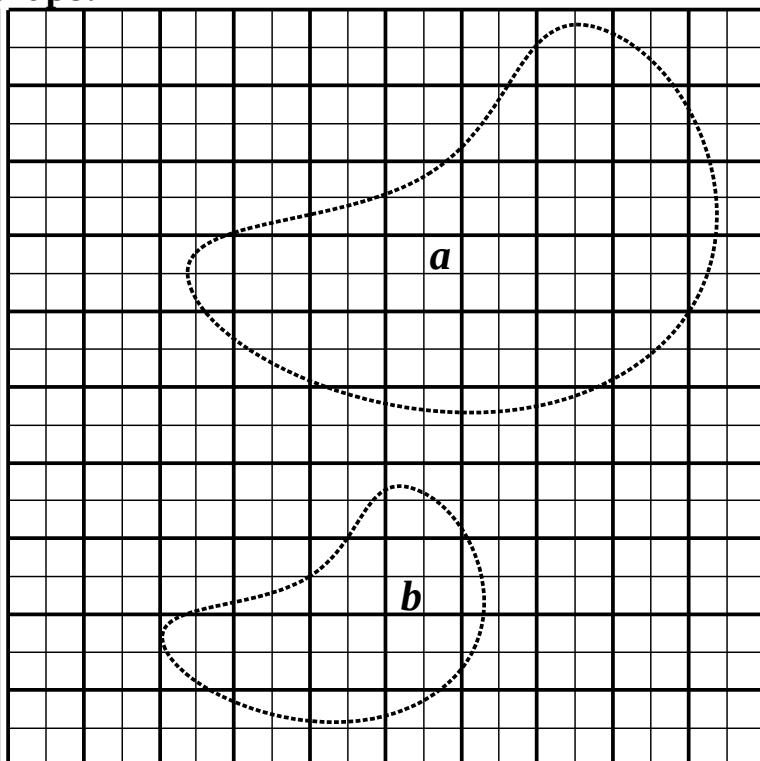
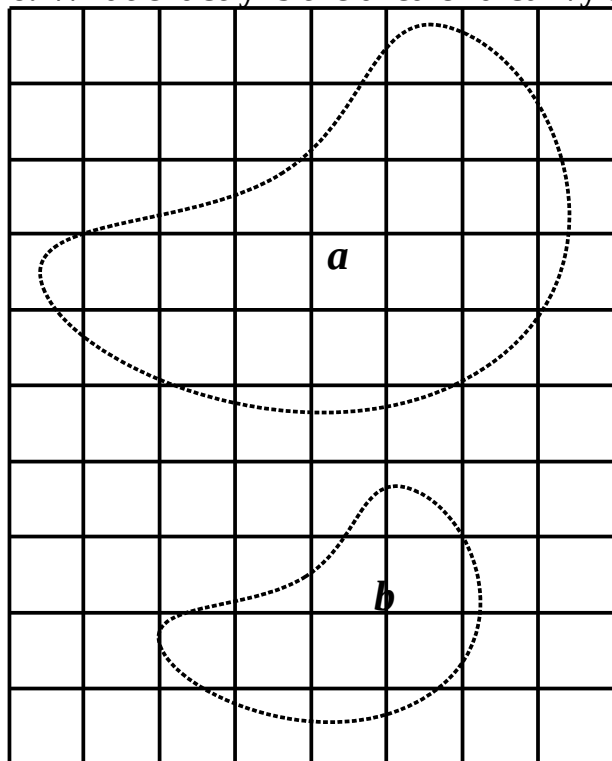
$|y + 2| = 4$

$|y + 2| = -4$

$|x - 3| = -1$

$|x - 3| = 1$

6. What exactly is the area of a curvy shape?



7. Calculate:

$$2 \times \frac{1}{4} =$$

$$\frac{1}{10} \times \frac{1}{2} =$$

$$\frac{1}{5} \times \frac{1}{6} =$$

$$2 : \frac{1}{4} =$$

$$\frac{1}{10} : \frac{1}{2} =$$

$$\frac{1}{5} : \frac{1}{6} =$$

$$2 \times \frac{1}{5} =$$

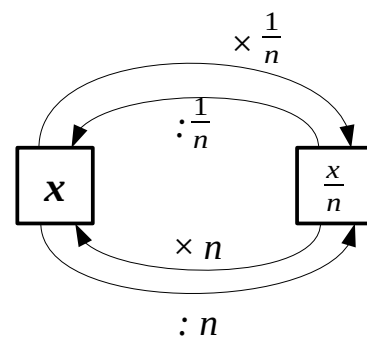
$$\frac{1}{10} : \frac{1}{6} =$$

$$\frac{1}{12} : \frac{1}{4} =$$

$$2 : \frac{1}{5} =$$

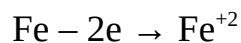
$$\frac{1}{10} \times \frac{1}{6} =$$

$$\frac{1}{12} \times \frac{1}{4} =$$

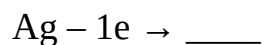


8. Negative numbers in atoms:

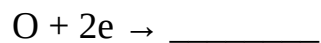
Atoms contain positive protons and negative electrons. A proton has an electric charge **+1**. An electron has an electric charge **-1**. Atoms do not have net electric charges since the numbers of electrons and protons are equal. Electrons can be added to atoms or removed from atoms. This way atoms acquire a charge becoming ions.



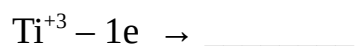
$$0 - (-1) \times 2 = 2$$



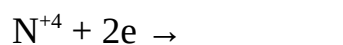
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