**Task 1 (video):**

1. Strike out the wrong word

**This video is played in an** $\frac{american}{english}$ **accent.**

2. Fill in the blanks
   - The set of **whole numbers** is {0, _, _, _, ...}.

   - The set of **integers** is {..., __, __, __, 0, _, _, _, ...}.

   - The set of **rational numbers** is composed of numbers that can be written as _____ of two _____.

   - **Irrational numbers** are numbers that _____ be written as _____ of two _____.

   - The set of **real numbers** includes **rational** numbers and **irrational** numbers.

3. Complete

| | 🇺🇸 | 🇬🇧 |
|---|---|---|
| -13 | _ _ _ _ _ _ _ _ thir<u>teen</u> | _ _ _ _ _ thir<u>teen</u> |

**Task 2:**

1. Stick the labels in the corresponding sets of numbers.

$\frac{-2}{3}$     0.4

-37.9

$0.\overline{7}$

3.0008

$\frac{13}{5}$     $-34\frac{5}{6}$

-6          -54

$-34^7$

-1 000 000

78     0

4

1     $10^3$

709          506

$\sqrt{43}$          $\pi$     $-\sqrt{3}$

2. Write two additional numbers of your choice in each set.

3. Colour each set.

**Task 3**: Dictation of numbers

Teacher:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Student A:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Student B:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**Task 4:** Write in full letters (Home work)

- $156^4$:_____

- $\dfrac{-3}{172}$:_____

- 0.84:_____

- - 0.003:_____

- $\sqrt{2\,009}$:_____

- $102^3$:_____

- $x^2$:_____

- $(x+1)^2$:_____

 **Task 5:** game (cards)

Check the number you're assigned and gather in accordance to the set you belong to.

**Task 6 (Homework) :** Write $\dfrac{\pi}{3};-1{,}5;10^6;-\sqrt{5};\dfrac{79}{5};-45.$ in the appropriate set.

**Task 7 (video):** Tick ☑

| Number | Proper fraction | Improper fraction | Mixed form |
|---|---|---|---|
| $-\dfrac{208}{67}$ | | | |
| $\dfrac{4}{7}$ | | | |
| $\dfrac{3}{15}$ | | | |
| $45\tfrac{4}{11}$ | | | |
| $-\dfrac{1001}{509}$ | | | |
| $6\tfrac{1}{32}$ | | | |
| $\dfrac{514}{753}$ | | | |

**Task 8:** Match

Proper fraction ● ●Numerator greater than or equal to the denominator after removing -/+ signs

Improper fraction ● ●Sum of a whole number and a proper fraction without the use the operator "+"

Mixed fraction ● ●Numerator smaller than the denominator after removing -/+ signs

**Task 9:** Simplify the fractions and transform into mixed form if necessary.

$$\frac{48}{78}; \frac{11}{33}; \frac{-243}{56}; \frac{24}{6}; \frac{45}{90}; \frac{-231}{23}.$$

**Task 10:** Dominos (group workshop)

**Task 11:** Plot the following numbers on the real number line (1 unit=2 cm):

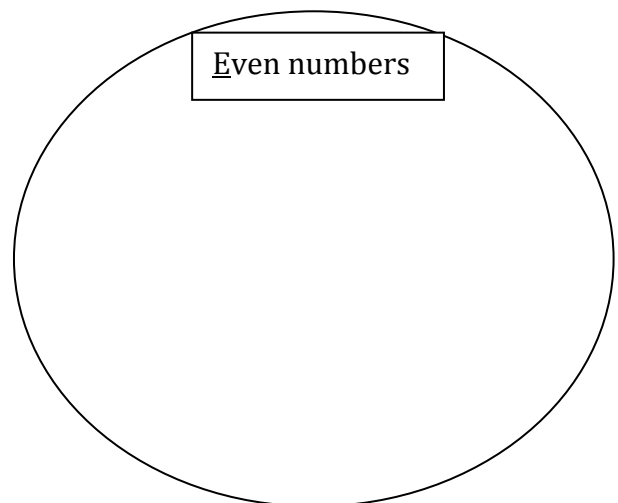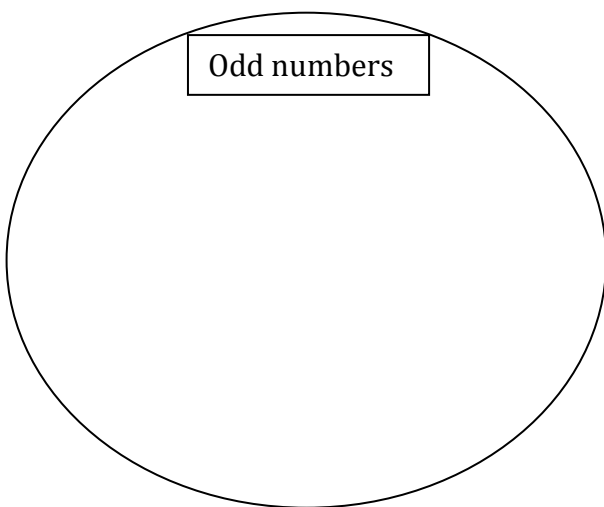$$5; -3 ; \frac{1}{2} ; \frac{-5}{4} ; 3.6 ; \sqrt{2}$$

**Task 12: Odd and even numbers**

The set of **even** numbers consists of 0, 2, 4, 6, 8 and all whole numbers whose last digit is one of these, e.g.: 22, 786, …

The set of **odd** numbers consists of 1, 3, 5, 7, 9 and all whole numbers whose last digit is one of these, e.g.: 1351

    1) Write the numbers in the appropriate circle:

| | | | |
|---|---|---|---|
| 6 | 9 | $34^9$ | 15 |
| 1 | 11 | 78 | $10^5$ |
| 68 | 4809 | 0 | 13 |
| $\sqrt{25}$ | 1808 | 12 | 4 |

Odd numbers

Even numbers

    2) Write two numbers of each category in the appropriate circle.

**Task 10: The History of Numbers through ancient civilizations**
(Group workshop)

**Task 11: A method of computing square roots** ⌨/▮ (pairwork: Student A/Student B)

To calculate the square root of a whole number $n$, computers use programs based on a method invented by the Babylonians and later enhanced by the Greek mathematician Hero of Alexandria.

The <u>princ</u>iple is to de<u>ter</u>mine an ap<u>proxima</u>tion of $\sqrt{n}$ by calculating suc<u>cess</u>ively $A_2, A_3, A_4, \dots$ given $A_1 = n$, $A_2 = \frac{1}{2}\left(A_1 + \frac{n}{A_1}\right)$, $A_3 = \frac{1}{2}\left(A_2 + \frac{n}{A_2}\right), \dots$

**Task 12: Quiz** (group workshop)