# Lesson Printables

Be a rockstar and only print what you need!

**Lesson Information Sheet:** 2

**Sunlight Zone**
Activity: 3
Optional Place Value Table: 4
Answers: 5

**Twilight Zone**
Activity: 6
Optional Place Value Table: 7
Answers: 8

**Midnight Zone**
Activity: 9
Optional Place Value Table: 10
Answers: 11

# Let's write and draw numbers using place value

## Why learn this?

In order for students to develop a conceptual understanding of numbers, they must understand the value of each digit in a number. Using place value knowledge and visual representations (ones, tens, hundreds, etc.) will show students that numbers are much more than simple digits, as each digit has its own value.
*Note, we have used the term 'ones' to indicate the place value column with the smallest value. You might wish to use the term 'units' if it is more applicable to your location.*

## How do you identify the place value of each digit in a number? How do you identify odd/even numbers?

**Translating place value blocks into written numbers**
- Students should draw a place value table and label each column. They should start with the ones on the right and then move towards the left, writing tens, hundreds. *Note, we have modelled up to the hundreds place value column, but your student might wish to go beyond and include thousands, ten thousands, etc.*
- Students should count how many ones, tens, hundreds, etc. blocks they have and then write the amount in each corresponding place value column.
- Students should then read the number.

**Representing numbers using place value blocks/drawings**
- Students should look at the written number and identify the individual digits in each place value column.
  ➔ 24 has 2 tens and 4 ones.
- Students should draw the given number of place value blocks in each place value column using squares for hundreds, sticks or lines for tens and dots or boxes for ones.
- The number of squares, sticks and dots should match the written number.
  ➔ For 24, students should draw 2 tens sticks and 4 ones dots.

**Identifying odd and even numbers**
- Identify the digit in the ones place value column.
- Draw 2 circles and then draw the amount of dots that matches the digit in the ones column, alternating between circles.
- If there is an equal number of dots in both circles, the number is even. If there isn't an equal number of dots in both circles, the number is odd.

## Let's warm up!

**Starter Activity** - **On Target**
Students are challenged to make the target number 10 using any of the numbers provided in the coloured boxes. Students could use many different number sentences to make the target number and any operation.

**To support, students could:**
- Work through an example with an adult. E.g. 4 + 6 = 10 or 5 + 2 + 3 = 10
- Use the same number more than once in the same number sentence. E.g. 4 + 4 + 2 = 10.
- Work together to share ideas and get inspired.

**To challenge, students could:**
- Explore how many different ways they can make the number 10.
- Try to use all 4 operations (addition, subtraction, multiplication and division) to make the target number.

## Let's do this!

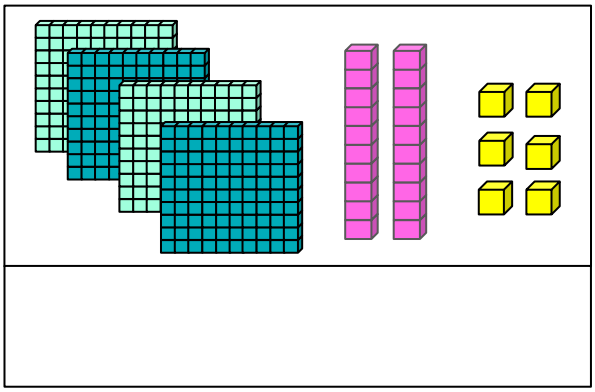
**Main Activity** - Students are given picture cards and number cards. Students are asked to write the number represented on a picture card and to draw the number represented on a number card.

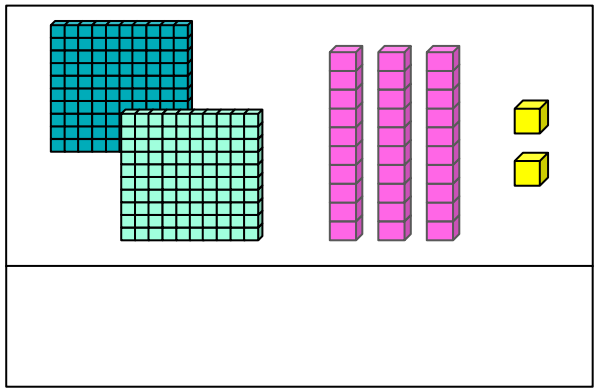
**To support, students could:**
- Use printed place value tables to write or draw their numbers on. (See printables below.)
- Work with base ten blocks or anything that could physically be used to represents ones, tens, hundreds, etc. This could include different coloured blocks, beans, counters, etc. E.g., Red blocks = 100s, blue blocks = tens and black blocks = ones. Students could physically build the number that matches the write/draw challenge that they are working on in order to reinforce the different place value columns and their value.
- Work with two-digit numbers.

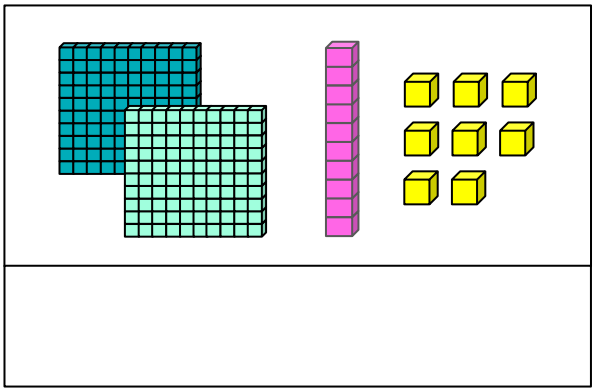
**To challenge, students could:**
- Work with four-digit numbers or bigger numbers.
- Identify if their number is odd or even.
- Order their numbers from the largest number to the smallest number.
- Become the teacher by creating their own picture/number challenges for someone else to solve.

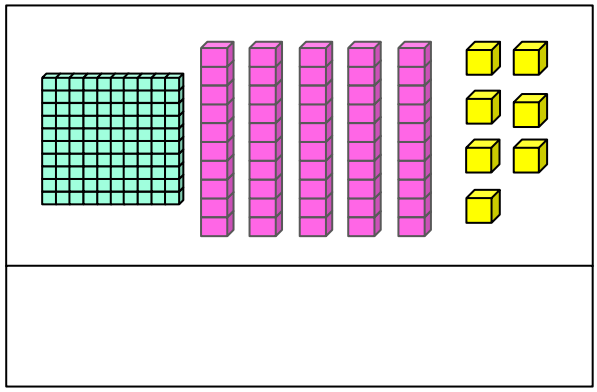
# Sunlight Zone

Write the numbers that the place value blocks show.









Draw the numbers written below.

63

52

49

65

Challenge: Build, write and draw different numbers.
Excellence: Identify if your number is odd or even.
Legend: Order your numbers from the largest number to the smallest number.

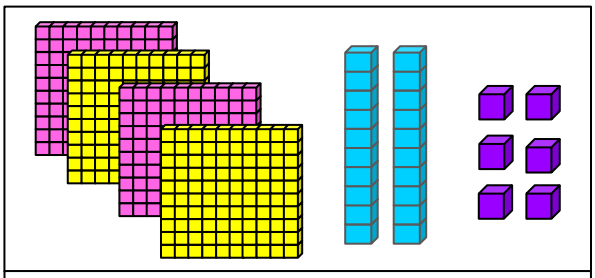
# Place Value Tables

| Tens | Ones |
| --- | --- |
| | |
| Number: | |

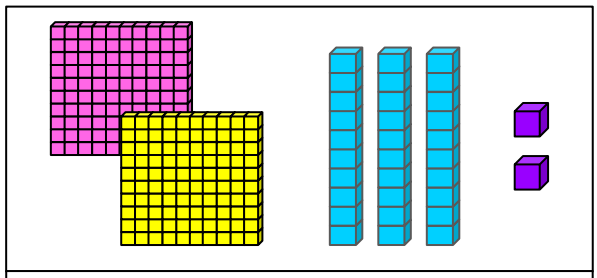
| Tens | Ones |
| --- | --- |
| | |
| Number: | |

| Tens | Ones |
| --- | --- |
| | |
| Number: | |

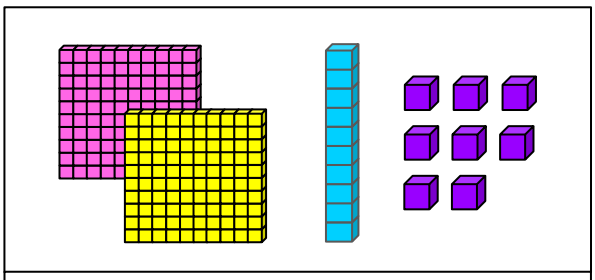
# Sunlight Answers



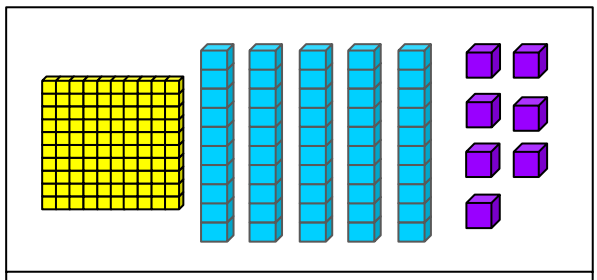
426 even



232 even

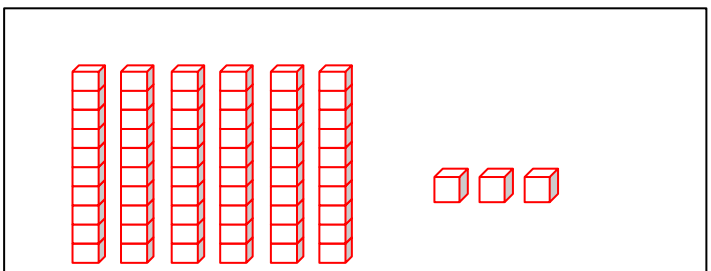


218 even

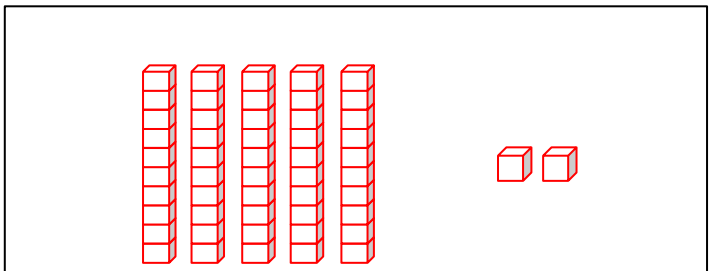


157 odd

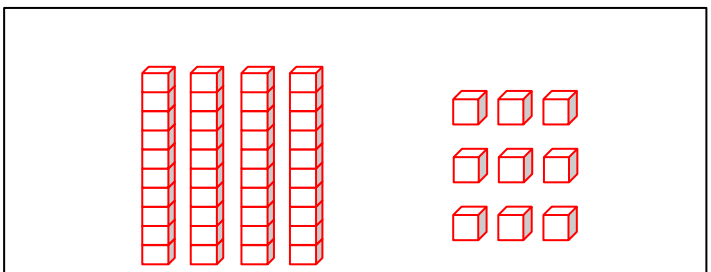
Students could draw boxes, lines and dots rather than actual place value blocks.



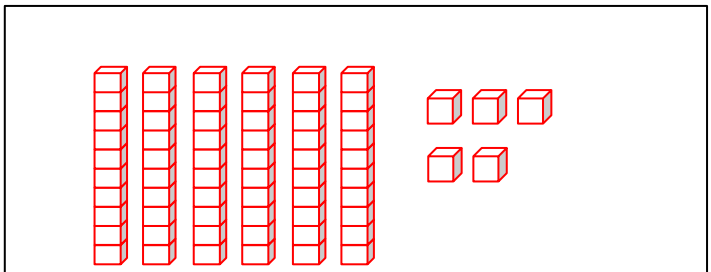
63 odd



52 even



49 odd

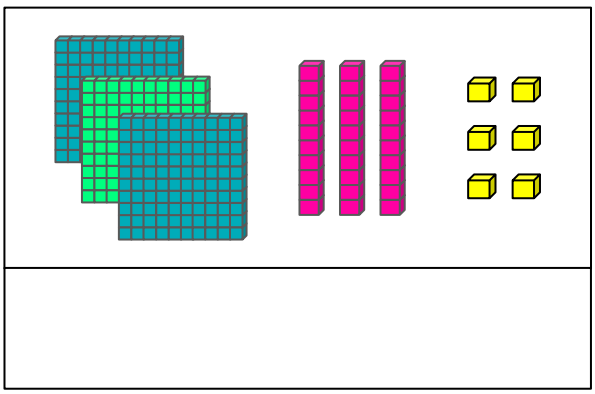


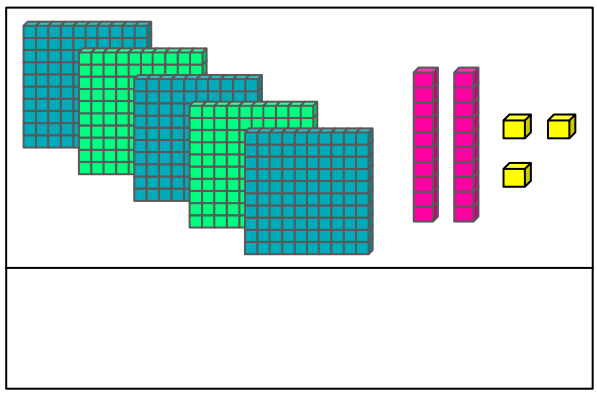
65 odd

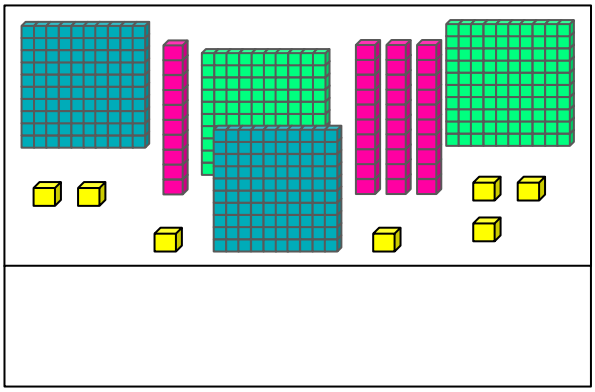
Order: 426, 232, 218, 157, 65, 63, 52 and 49

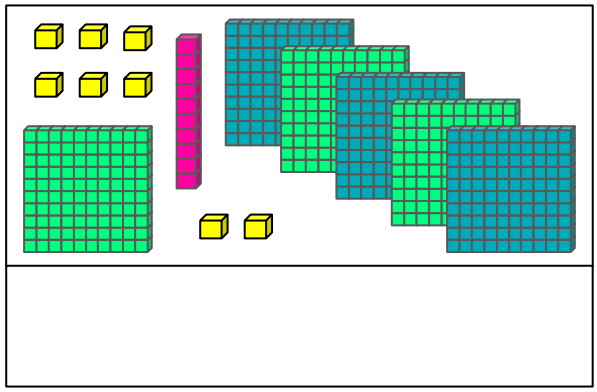
# Twilight Zone

Write the numbers that the place value blocks show.









Draw the numbers written below.

263

349

407

518

Challenge: Build, write and draw different numbers.
Excellence: Identify if your number is odd or even.
Legend: Order your numbers from the largest number to the smallest number.

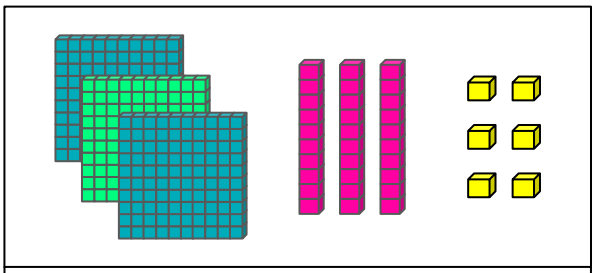
# Place Value Tables

| Hundreds | Tens | Ones |
| --- | --- | --- |
| | | |
| Number: | | |

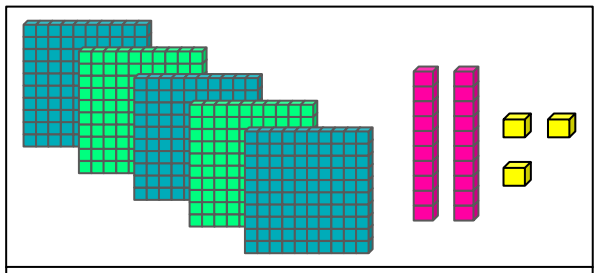
| Hundreds | Tens | Ones |
| --- | --- | --- |
| | | |
| Number: | | |

| Hundreds | Tens | Ones |
| --- | --- | --- |
| | | |
| Number: | | |

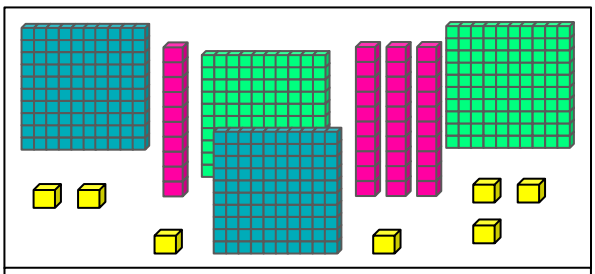
# Twilight Answers



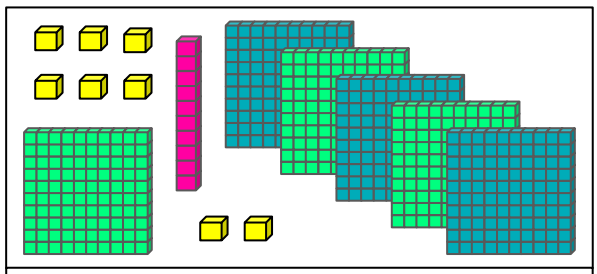
336 even



523 odd

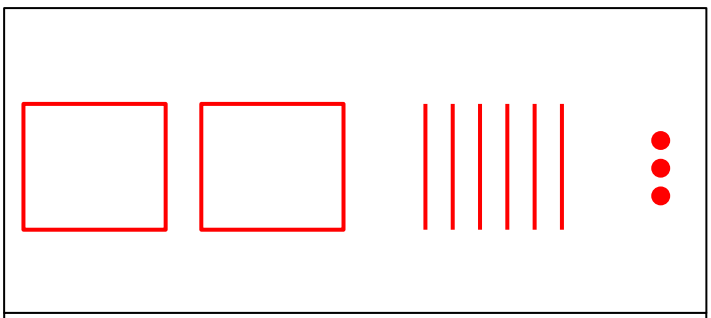


447 odd

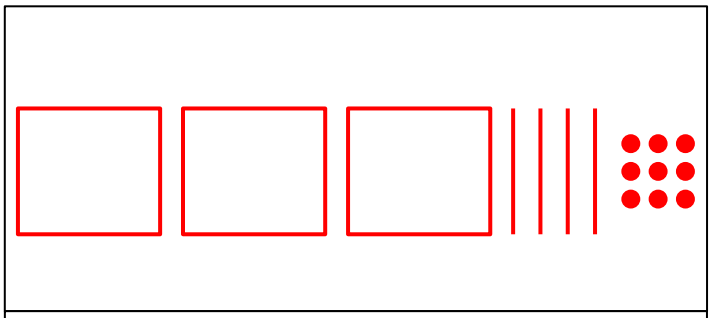


618 even

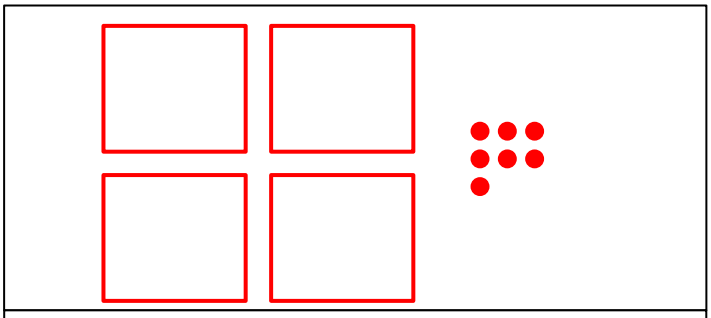
Squares represent hundreds, lines represent tens and circles represent ones.



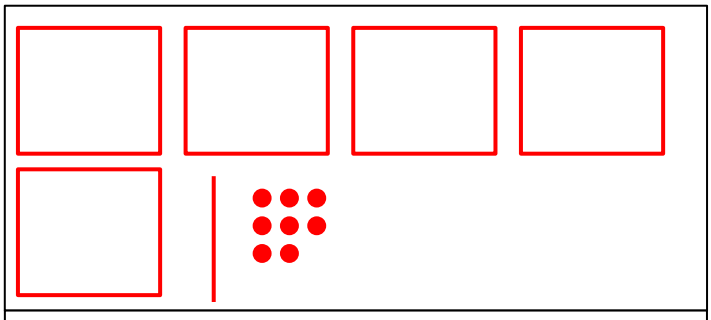
263 odd



349 odd



407 odd

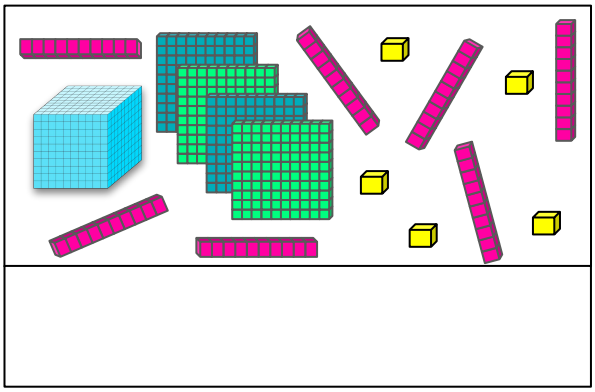


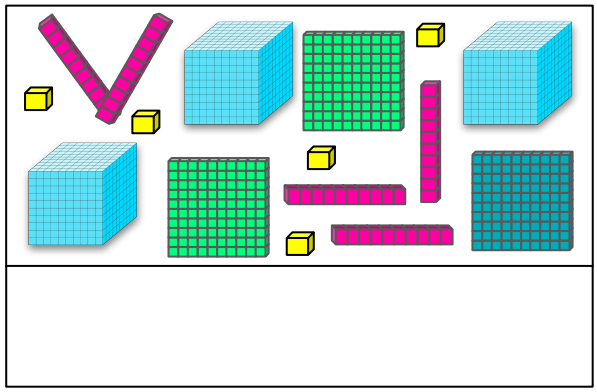
518 even

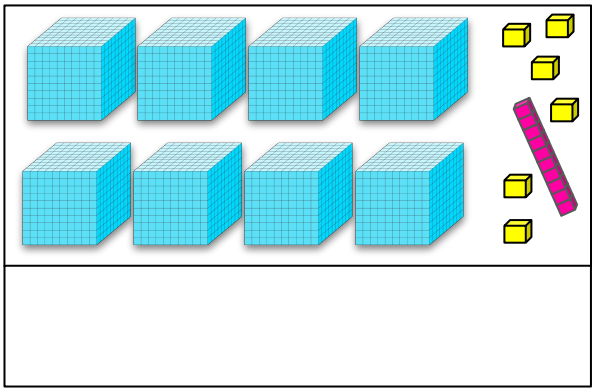
Order: 618, 523, 518, 447, 407, 349, 336, 263

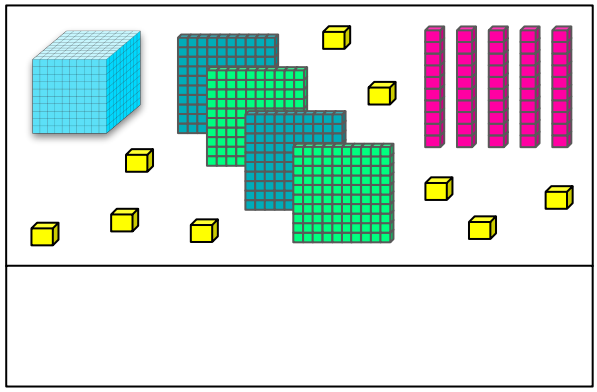
# Midnight Zone

Write the numbers that the place value blocks show.









Draw the numbers written below.

| | |
|---|---|
| 3,263 | 4,349 |
| 2,470 | 4,097 |

Challenge: Build, write and draw different numbers.
Excellence: Identify if your number is odd or even.
Legend: Order your numbers from the largest number to the smallest number.

# Place Value Tables

| , | | | |
|---|---|---|---|
| | | | |

Number:

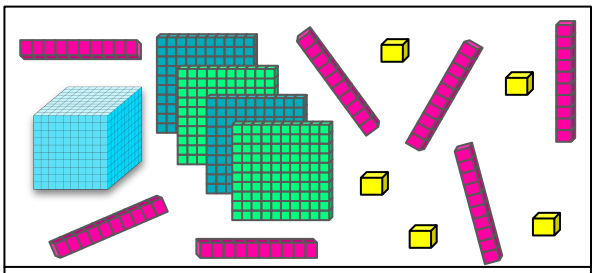
| , | | | |
|---|---|---|---|
| | | | |

Number:

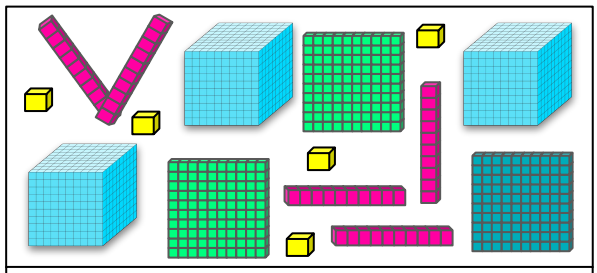
| , | | | |
|---|---|---|---|
| | | | |

Number:

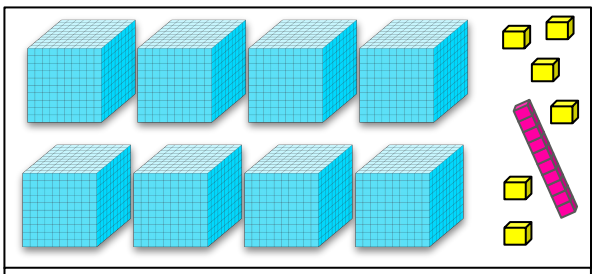
# Midnight Answers



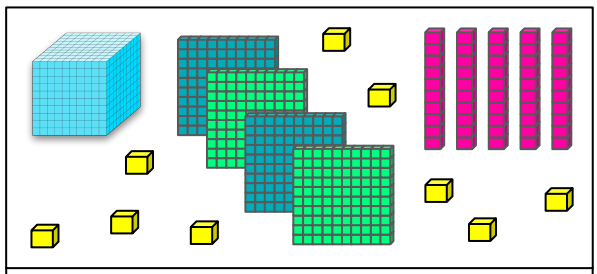
1,475 odd



3,355 even

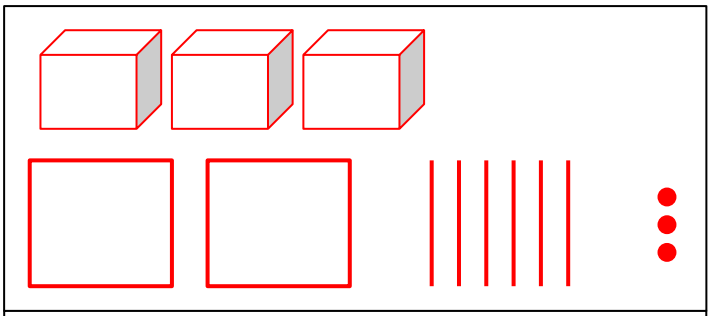


8,016 even

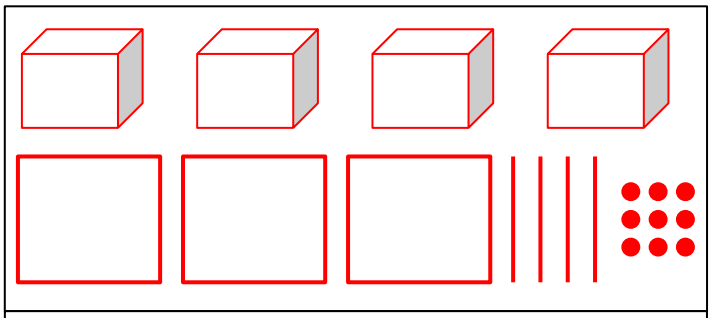


1,459 odd

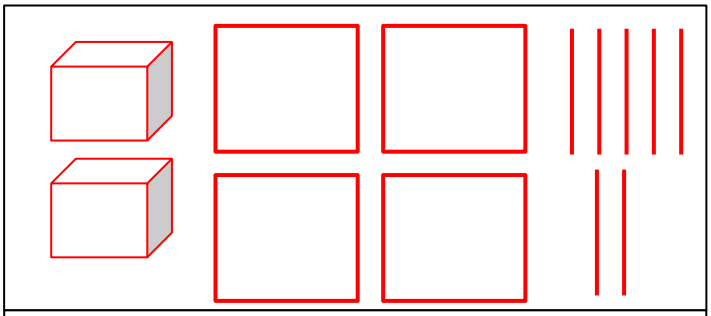
Boxes represents thousands, squares represent hundreds,
lines represent tens and circles represent ones.



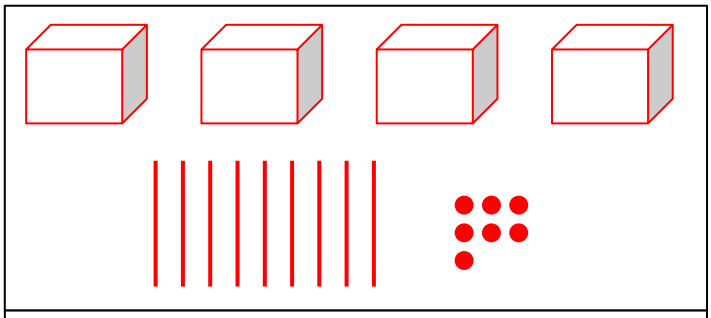
3,263



4,349 odd



2,470 even



4,097 odd

Order: 8,016, 4,349, 4,097, 3,355, 3,263, 2,470, 1,475, 1,459