# Number Sense, Probability and Primes

Year 7 Term 6

## (1) Key Terms

| | |
|---|---|
| **Estimate** | To give an **approximate** answer using rounding. |
| **Universal Set** | The set containing **all** relevant individual items (called elements). |
| **Set** | A **collection** of objects or numbers. |
| **Highest Common Factor (HCF)** | For two numbers, the **greatest** number that is a factor of both numbers. For example, the **HCF of 6 and 8 is 2**. |
| **Lowest Common Multiple (LCM)** | For two numbers, the **smallest** number that is a **multiple of both** numbers. For example, the **LCM of 2 and 3 is 6.** |

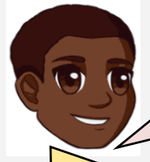
## (2) Estimation

Making a quick **estimate** can help you **to spot** calculation **errors.**

Which is the most appropriate calculation to use to estimate the answer to 87 × 28 ?

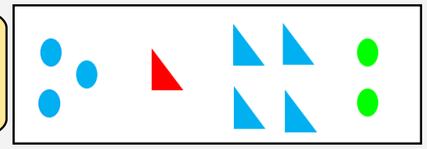
| | | | |
|---|---|---|---|
| 80 × 20 | 80 × 30 | 90 × 20 | 90 × 30 ✓ |

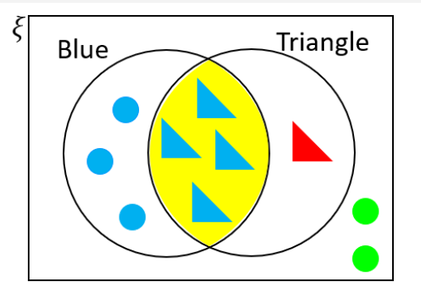
## (3) Venn Diagrams



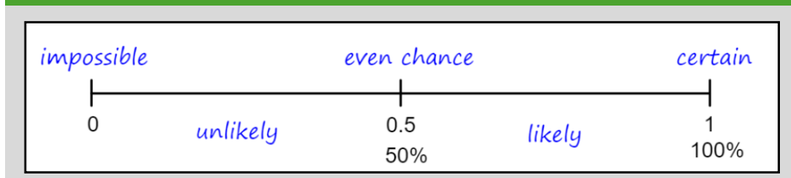
Venn diagrams allow you to organise two or more **sets** of data.

We can organise these shapes.



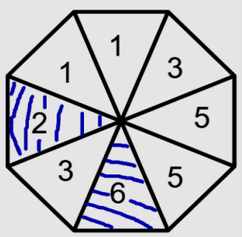


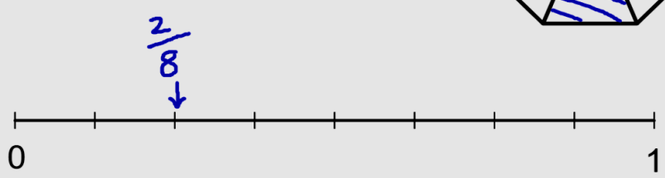

## (4) The Probability Scale




The spinner is spun:

Mark on the **Probability Scale** the chance it lands on an **even number**.



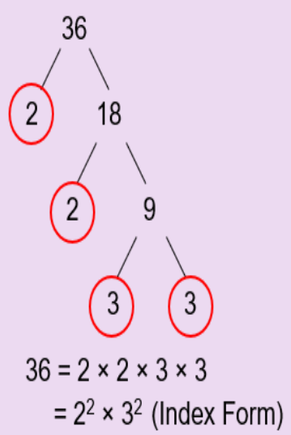




**Trinity TV**

For more help, visit Trinity TV

## (5) Product of Prime Factors

You can use a **Prime Factor Tree** to help display any positive integer as the **Product of its Prime Factors.**




$36 = 2 \times 2 \times 3 \times 3$

$= 2^2 \times 3^2$ (Index Form)

1. **Divide** your number into **2 factors** that multiply to make your starting number.
2. **Circle** any factors that are prime numbers.
3. Continue to **divide** any **numbers** that are **not prime**.
4. Write your answer as a multiplication (product).

## (6) Lowest Common Multiple

Find the lowest common multiple of 12 and 15

12, 24, 36, 48, **60**, 72, 84, 96 . . .

15, 30, 45, **60**, 75, 90, 105 . . .

Don't confuse **LCMs** with **HCFs**.

Think! Multiples need multiplications.