

SHALOM PRIMARY SCHOOL

P.6 MATHEMATICS WORK

Date: 19th June 2020.

Subtopic: **Operations on finites**

Content: **Addition in finite/modular system**

Example 1. Add: $3 + 4 = \text{-----}$ (finite 5)

Solution

$$3 + 4 = - \text{ (finite 5)}$$

$$3 + 4 = 7$$

$$7 \div 5 = 1 \text{ r } \textcircled{2}$$

$$3 + 4 \equiv \underline{2} \text{ (finite 5)}$$

NOTE: When adding numbers in finite system, the answer must not exceed the finite and if you add the given numbers and they exceed the finite then you have to divide by the given finite /mod hence **the remainder becomes the answer.**

Example 2: Add: $5 + 3 = \text{-----}$ (finite 7)

Solution

$$5 + 3 = \text{-----} \text{ (finite 7)}$$

$$5 + 3 = 8$$

$$8 \div 7 = 1 \text{ r } \textcircled{1}$$

$$5 + 3 \equiv \underline{1} \text{ (finite 7)}$$

Example 3: Find the value of y in $7 + 8 = y \pmod{12}$

Solution

$$7 + 8 = y \pmod{12}$$

$$7 + 8 = 15$$

$$15 \div 12 = 1 \text{ r } \textcircled{3}$$

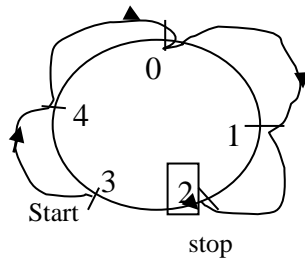
$$7 + 8 = 3 \pmod{12}$$

$$y = \underline{3} \pmod{12}$$

Addition in finite using dial method.

Example 1: Add: $3 + 4 = \text{-----}$ (finite 5)

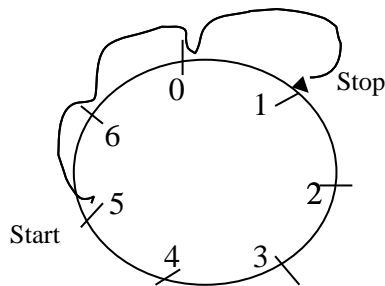
Solution



$$3 + 4 \equiv \underline{2} \text{ (finite 5)}$$

Example 2: Add: $5 + 3 = \text{-----}$ (finite 7)

Solution



$$5 + 3 \equiv \underline{1} \text{ (finite 7)}$$

NOTE: When using dial method, the digits used should begin with 0 ,1 etc. but do not exceed the given finite as shown above.

When working out, **start** with the first digit then count the steps for the other digit and where you will **stop** hence becomes the answer

ACTIVITY

- 1. Add: $2 + 4 = \text{-----}$ (finite 5)**
- 2. Work out : $4 + 3 = \text{-----}$ (finite 7)**
- 3. Add : $3 + 6 = \text{-----}$ (mod 8)**
- 4. Add : $5 + 4 = \text{-----}$ (finite 6)**
- 5. Work out : $6 + 7 = k$ (finite 9)**
- 6. Work out the following using dial method**
 - a. $4 + 4 = \text{-----}$ (finite 5**
 - b. $6 + 3 = \text{----}$ (modular 7)**
 - c. $2 + 5 = \text{-----}$ (finite 7)**
 - d. $4 + 7 = \text{-----}$ (finite 9)**
 - e. $5 + 5 = n \text{ (mod 6)}$**

You can write this work in the class work book. Stay safe dear.

GOD IS LOVE