المدرسة الوطنية الأرثوذكسية الشميساني

The National Orthodox School Shmaisani

Math Support sheet | The Secondary Stage of (6-8)

1st Semester | 2023-2024

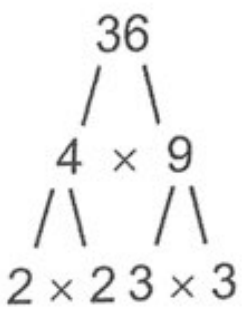
Subject: Math **Chapter:** 1

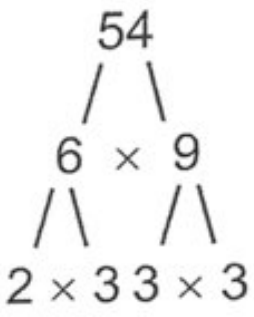
Objectives:

- To review how to find LCM and HCF using prime factorization.

LCM and HCF

Example 1: Find LCM and HCF of 36 and 54:





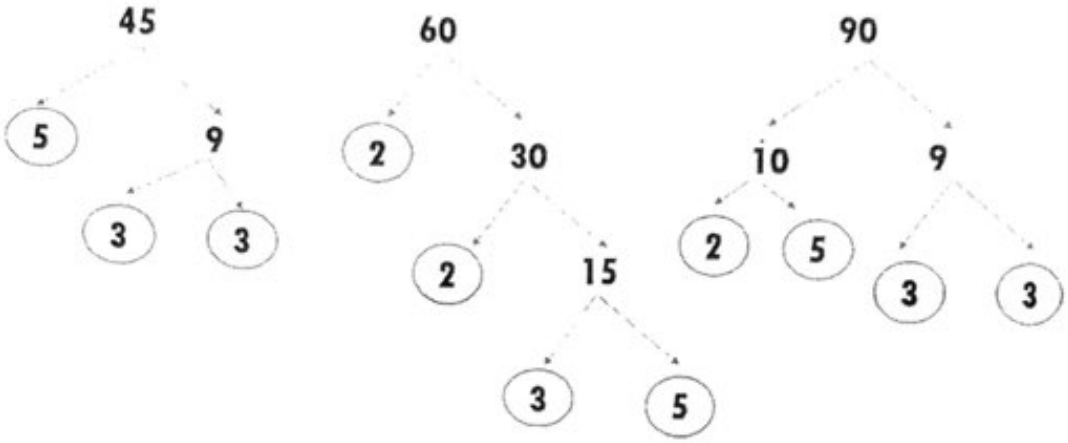
$36 = 2 \times 2 \times 3 \times 3$

$54 = 2 \times 3 \times 3 \times 3$

HCF $= 2 \times 3 \times 3 = 18$ (take one from every common group and find their product)

LCM$= 2 \times 2 \times 3 \times 3 \times 3 = 108$ (take one from every common group, take what is **left** as well and find their product)

Example 2: Find HCF and LCM of 45, 60 and 90:



$45 = 3 \times 3 \times 5$

$60 = 2 \times 2 \times 3 \times 5$

$90 = 2 \times 3 \times 3 \times 5$

You can have groups of three numbers and groups of 2 numbers for LCM.

HCF $= 3 \times 5 = 15$ (take one from the big groups **only** (groups of 3) and find their product)

LCM $= 2 \times 2 \times 3 \times 3 \times 5 = 180$ (take one from every big group, take one from every smaller group, take what's **left** and find their product)

Extra practice:

Find HCF and LCM for the below sets of numbers:

a) 120 and 340

b) 850 and 900

c) 10, 14 and 28

d) 9, 15 and 30

e) 25, 30 and 50

f) 7, 27 and 35

g) 30, 45 and 80