Divisible? Yes or No

	132	3456	188	540
2	y	y	y	y
3	y	y	n	y
4	y	y	y	y
5	n	n	n	y
6	y	y	n	y
9	n	y	n	y
10	n	n	n	y

Explain why the divisibility rules work for the following.

2,5,10

All groups of 10, 100 and 100 are divisibly by 2,5 and 10 so you only need to look at the one's place value

3,9

All groups of 10's 100, 1000's etc are just groups of 9, 99, and 999 plus 1 more so we can just all the digits to check divisibility by 3 and 9

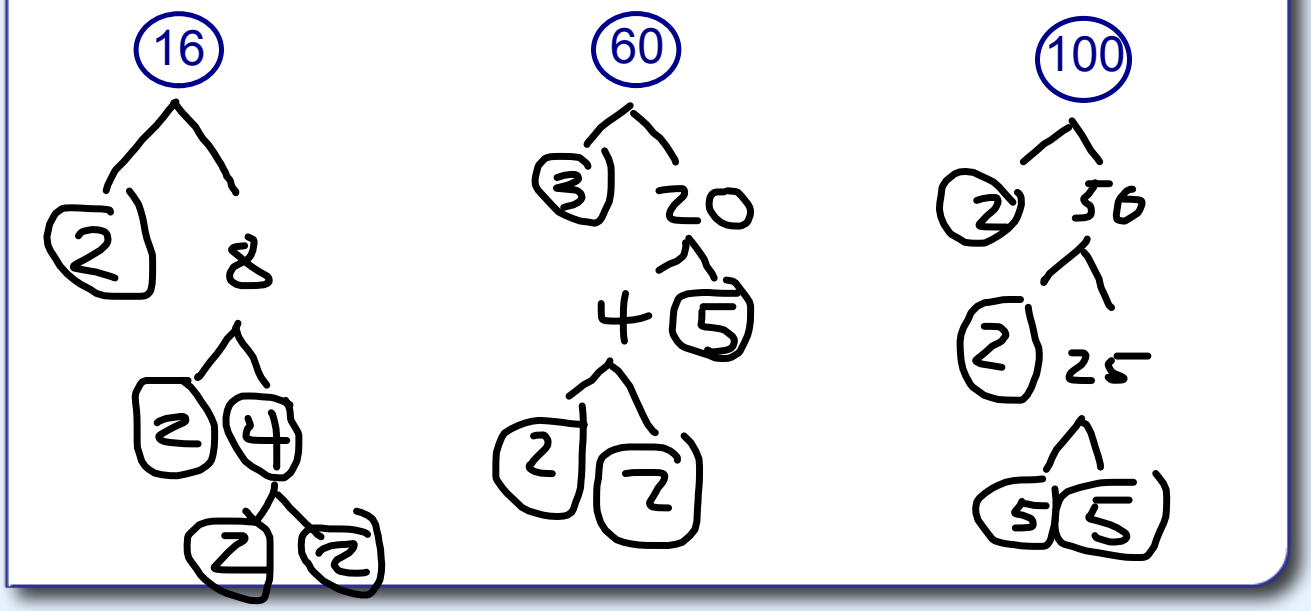
4, and 8

All groups of 100 are divisibly by 4 and all groups of 100 are divisibly by 8 so we only need to look at the last 2 or three digits of the numbers

6

2 and 3 are both factors of 6 so all numbers divisibly by 2 and 3 must be divisibly by 6. They are all in the same fact family

Use factor trees to break each number into its prime factors.



Find the Prime Factorization

216

$216 = 2 \times 2 \times 2 \times 3 \times 3 \times 3$

$2^3 \times 3^3$

4000

$4000 = 2^5 \cdot 5^3$

2x2x2x2x2x5x5x5

Using PRIME FACTORS find the GCF and LCM of:

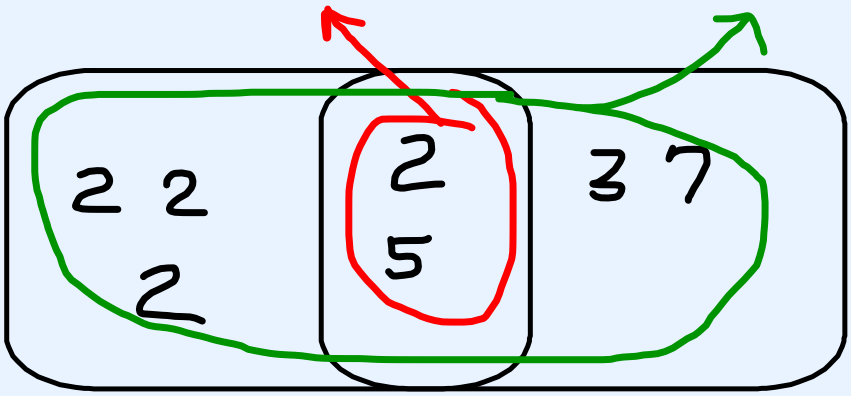
80 and 210

2x2x2x2x5

2x3x5x7

GCF = 2x5 = 10

LCM = 10x2x2x2x3x7 = 1680



Using PRIME FACTORS find th GCF and LCM of:

360

2x2x2x3x3x5

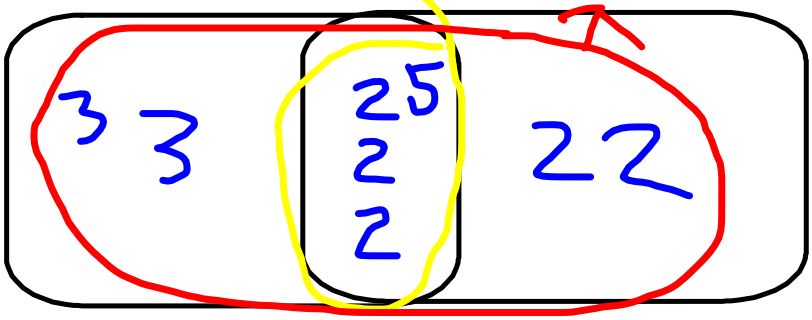
&

160

2x2x2x2x2x5

GCF = 2x2x2x5 =40

LMC = 40x3x3x2x2=1440



Find 6 more factors of 240 using the Prime factorization method. Show your work

2x2x2x2x3x5 = 240

2 - 2x2x2x3x5 120

3 - 2x2x2x2x5 80

5 - 2x2x2x2x3 48

---

4 2x2 - 2x2x3x5 60

6 2x3 - 2x2x2x5 40

10 2x5 - 2x2x2x3 24

15 3x5 - 2x2x2x2 16

---

12 2x2x3 - 2x2x5 20

8 2x2x2 - 2x3x5 30

1,2,3,4,5,6,8,10,12, 15, 16, 20, 24, 30, 40, 48, 60, 80, 120, 240

Change into Scientific notation

000.0000436 4.36×10^{-5}

2480000 2.48×10^{6}

1345700 1.3457×10^{6}

34000000000000 3.4×10^{13}

1.23×10^{4} 12300

6.5×10^{-7} 0.00000065

Represent the following numbers in as many ways as you can!

112

56 x 2

120-8

100+12

224/2

1.12 x 100

250

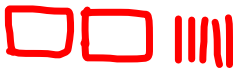
50+50+50+50+50

50 x 5

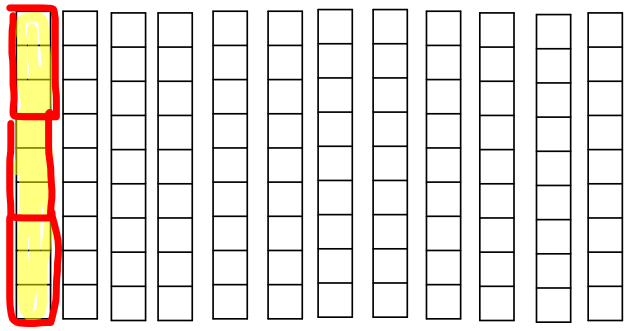
300-50

125x2

500/2



Use pictures and words to show that if 9 is a factor of 108 then 3 must also be a factor.



The array shows that there are 12 groups or 9 in 109. Each group of 9 can be further divided up into 3 groups of 3. This shows that all groups of 9 will have 3 as a factor.

Xtra Practice

GCF LCM	36	70	306	210
60	GCF of 36 & 60 LCM of 36 & 60			
42				
204				
150				

Find ALL the factors of 360 using the prime factors

Put a check mark in the box if the number in the top row is divisible by the number in the left column

Xtra Practice

	346	522	2400
2			
3			
5			
6			

Attachments

GCF & LCM.doc