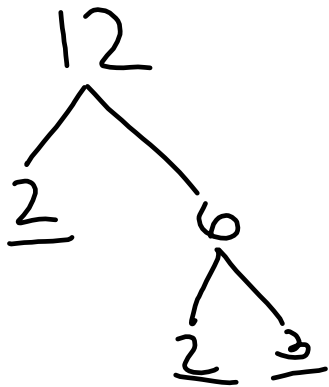Thursday, Oct 1st

Homework Review on LCM & GCF
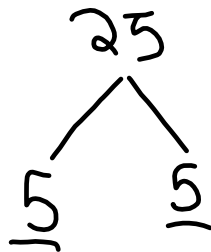
(ex #1) Find the LCM & GCF of
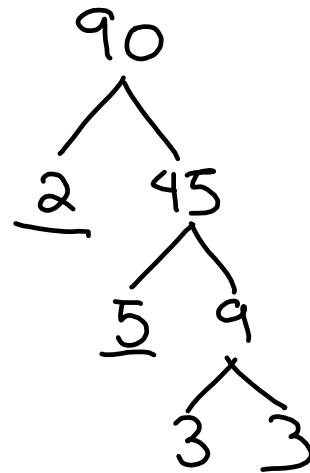
12, 25 and 90

12

2   6

2   3

$12 = 2 \times 2 \times 3$

25

5   5

$25 = 5 \times 5$

90

2   45

5   9

3   3

$90 = 2 \times 3 \times 3 \times 5$
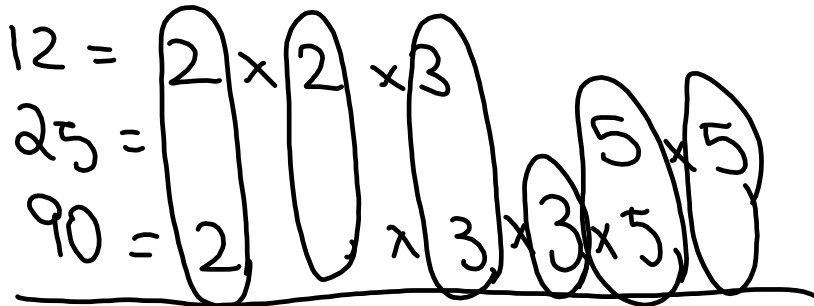
$12 = 2 \times 2 \times 3$
$25 = 5 \times 5$
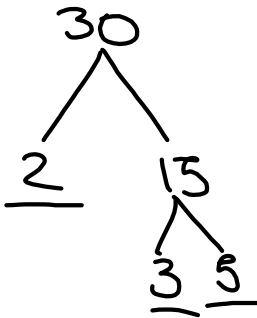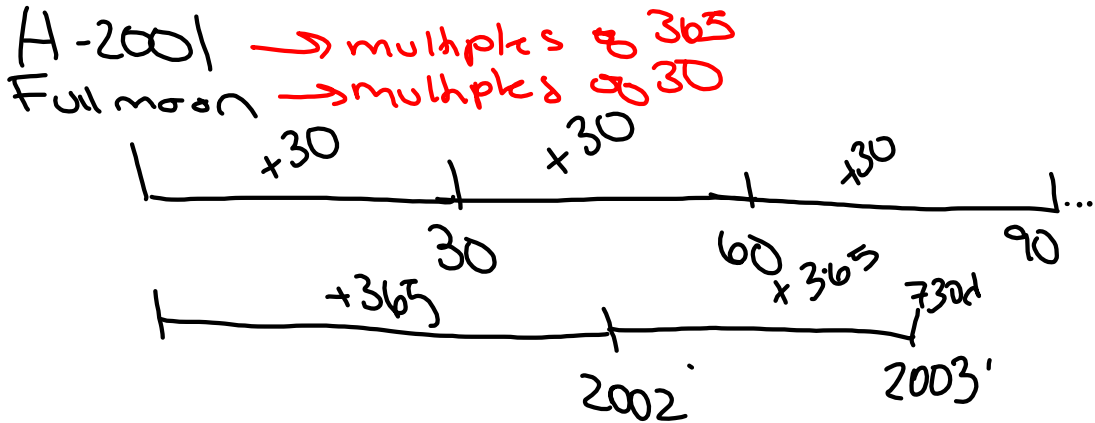$90 = 2 \times 3 \times 3 \times 5$

GCF = no GCF [1]

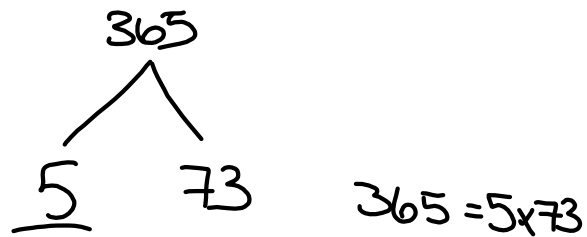$LCM = 2 \times 2 \times 3 \times 3 \times 5 \times 5$
$= 900$

$\begin{array}{r} \overset{3}{36} \\ \times\ 5 \\ \hline 180 \end{array}$

$\begin{array}{r} \overset{4}{180} \\ \times\ 5 \\ \hline 900 \end{array}$

1

The last time there was a full moon on Halloween evening (Oct 31ˢᵗ) was in 2001. It takes 30 days for the moon to complete one cycle. ~~If we assume, for the sake of this question, that~~ there are 365 days in every year, how often should we see a full moon on Halloween evening?

H -2001 ⟹ multiples of 365
Full moon → multiples of 30

$$30 = 2 \times 3 \times 5$$

$$365 = 5 \times 73$$

Divisibility rules

÷2 ✗
÷3 ✗
÷4 ✗
÷5 ✗
÷6 ✗
÷7 ✗
÷8 ✗
÷9 ✗
÷10 ✗

$$30 = \cancel{2} \times \cancel{3} \times \cancel{5}$$
$$365 = \qquad \cancel{5} \times 73$$
$$\overline{\text{LCM} = 2 \times 3 \times 5 \times 73}$$
$$= 2190 \text{ days}$$