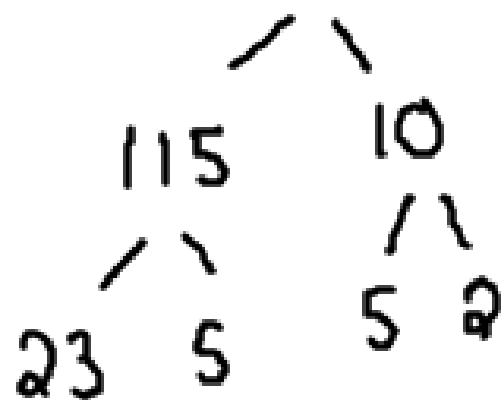
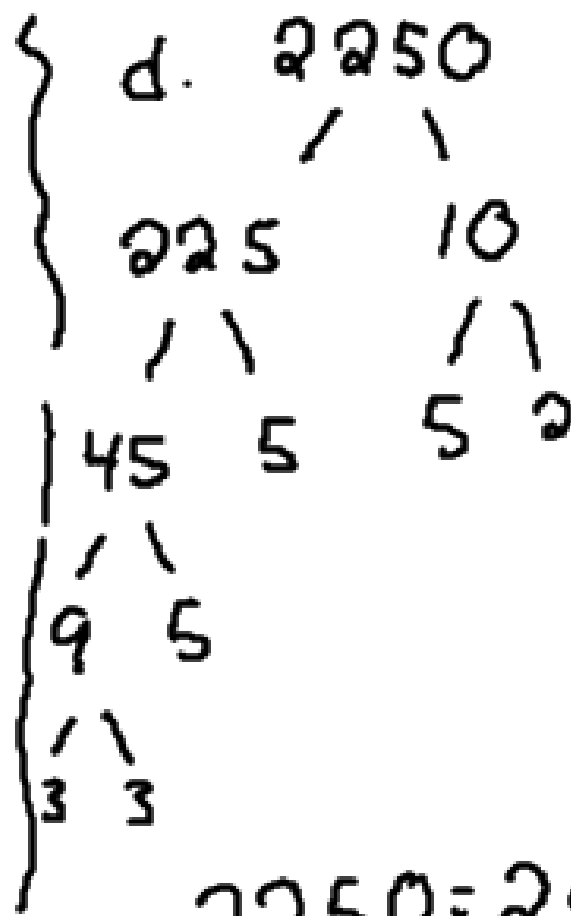


6. b) 1150



$$1150 = 2 \cdot 5^2 \cdot 23$$



$$2250 = 2 \cdot 3^2 \cdot 5^3$$

3.1 cont'd...

GCF and LCM and Fractions.....

Simplifying Fractions - prime factorization.
and cancel.

$$\frac{185}{325}$$

$$\frac{185}{325} = \frac{\cancel{5} \cdot 37}{\cancel{5} \cdot 5 \cdot 13} = \frac{37}{5 \cdot 13} = \frac{37}{65}$$

GCF is cancelled.

$$\frac{340}{380} = \frac{\cancel{2} \cdot \cancel{2} \cdot \cancel{5} \cdot 17}{\cancel{2} \cdot \cancel{2} \cdot \cancel{5} \cdot 19} = \frac{17}{19}$$

$$2 \cdot 2 \cdot 5 = 20$$

LCM adding Fractions

- common denominator

$$\frac{3}{4} + \frac{1}{6}$$

$$\frac{3}{4} \left(\frac{3}{3} \right) + \frac{1}{6} \left(\frac{2}{2} \right)$$

$$\frac{9}{12} + \frac{2}{12}$$



LCM

4: $2 \cdot 2$ ← all

6: $2 \cdot 3$ ← take any I don't have

$$\text{LCM: } 2 \cdot 2 \cdot 3 = 12.$$

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3.2.

Perfect Squares - a number that has two identical factors.

1, 4, 9, 16, 25, 36, 49, 64,

$$\begin{array}{r} 25 \\ \diagdown \quad \diagup \\ 5 \quad 5 \end{array}$$

ex, is 1296 a perfect square?

Prime factorization

$$(2 \cdot 2 \cdot 3 \cdot 3) (2 \cdot 2 \cdot 3 \cdot 3)$$

1296	:	2	=	648
648	:	2	=	324
324	:	2	=	162
162	:	2	=	81
81	:	3	=	27
27	:	3	=	9
9	:	3	=	3
3	:	3	=	1

$$1296 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3 \cdot 3$$

If all factors are pairs, it is a perfect square.

$$\sqrt{1296} = 2 \cdot 2 \cdot 3 \cdot 3 = 36$$

Perfect Cubes: a number that can be written as three identical factors.

1, 8, 27, 64, 125,

Is 1728 a perfect cube?

Prime Factors.

$$\begin{array}{l} 1728 \div 2 = 864 \\ 864 \div 2 = 432 \\ 432 \div 2 = 216 \\ 216 \div 2 = 108 \\ 108 \div 2 = 54 \\ 54 \div 2 = 27 \end{array}$$

$$\begin{array}{l} 27 \div 3 = 9 \\ 9 \div 3 = 3 \\ 3 \div 3 = 1 \end{array}$$

$$1728 = \underbrace{2 \cdot 2}_{\text{red}} \underbrace{2 \cdot 2}_{\text{blue}} \underbrace{2 \cdot 2}_{\text{green}} \underbrace{3}_{\text{red}} \underbrace{3}_{\text{blue}} \underbrace{3}_{\text{green}}$$

identical groups of 3.

$$1728 = (2 \cdot 2 \cdot 3) (2 \cdot 2 \cdot 3) (2 \cdot 2 \cdot 3)$$

$$\sqrt[3]{1728} = 2 \cdot 2 \cdot 3 = 12$$



MATH \rightarrow 4: $\sqrt[3]{(\quad)} =$

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p.146 #4-8, 10
4,5 can do half