

BLC-150: HOMEWORK 2
Due when we meet for Class 2 (Feb. 8)

Prime factorization

1. Factor the following numbers into primes. I did some of them so that you can see what I want. Use scrap paper to figure them out. Just put the answers on this table.

		Raw form (all prime factors individually written out in order)	Exponential form
e.g. 1	15 =	=	
e.g. 2	152 =	=	
a.	36 =	=	
b.	18 =	=	
c.	250 =	= $25 \cdot 10 = 5 \cdot 5 \cdot 5 \cdot 2 = 2 \cdot 5 \cdot 5 \cdot 5$	= $2 \cdot 5^3$
d.	66 =	=	
e.	23 =	= 23 That's it. Twenty-three is a prime number.	= 23
f.	93 =	=	
g.	49 =	=	
h.	82 =	=	
i.	161 =	=	
j.	133 =	=	
k.	1024 =	=	

2. The Dreaded Fraction: Convert the following fractions by filling in the missing numbers. **Members of each row are all equal.** You can check your answers with a calculator if you want.

e.g. 1	1	=	$\frac{1}{\quad}$	=	$\frac{\quad}{3}$	=	$\frac{\quad}{15}$
e.g. 2	$\frac{1}{3}$	=	$\frac{2}{6}$	=	$\frac{\quad}{9}$	=	$\frac{\quad}{12}$
e.g. 3	$\frac{1}{\quad}$	=	$\frac{2}{10}$	=	$\frac{\quad}{20}$	=	$\frac{8}{\quad}$
e.g. 4	$\frac{\quad}{4}$	=	$\frac{1}{\quad}$	=	$\frac{2}{16}$	=	$\frac{8}{\quad}$
e.g. 5	$\frac{\quad}{0.5}$	=	$\frac{6\pi}{1}$	=	$\frac{\quad}{2}$	=	$\frac{36\pi}{\quad}$
1	$\frac{1}{2}$	=	$\frac{2}{\quad}$	=	$\frac{\quad}{6}$	=	$\frac{4}{\quad}$
2	$\frac{\quad}{3}$	=	$\frac{4}{6}$	=	$\frac{\quad}{12}$	=	$\frac{16}{\quad}$
3	$\frac{2}{\quad}$	=	$\frac{4}{1}$	=	$\frac{8}{\quad}$	=	$\frac{\quad}{5}$
4	$\frac{2.5}{\quad}$	=	$\frac{5}{\quad}$	=	$\frac{10}{200}$	=	$\frac{\quad}{1000}$
5	$\frac{\$0.30}{\quad}$	=	$\frac{\quad}{2}$	=	$\frac{\$1.20}{4}$	=	$\frac{\$2.40}{\quad}$
6	$\frac{0.5}{\quad}$ (cookie)	=	$\frac{1}{5}$ (cookie)	=	$\frac{\quad}{10}$ (cookie)	=	$\frac{3}{\quad}$ (cookie)
7	$\frac{9}{\quad}\pi$	=	$\frac{18}{2}\pi$	=	$\frac{\quad}{4}\pi$	=	$\frac{\quad}{3}\pi$
8	$\frac{0.5\pi}{\quad}$	=	$\frac{\quad}{2}$	=	$\frac{2\pi}{4}$	=	$\frac{4\pi}{\quad}$

3. Evaluate these. You need to find common denominators. Do this in the same way we did in the exercise above. I did a couple to help you get started. Write all answers as fractions, not mixed fractions. I.e. $\frac{4}{3}$ not $4\frac{1}{3}$. All answers should be simplified to lowest forms. I.e. Reduce $\frac{5}{15}$ to $\frac{1}{3}$.

		Put answers here
A	$\frac{2}{17} + \frac{5}{34} = \frac{4}{34} + \frac{5}{34} = \frac{9}{34}$ -----	$\frac{9}{34}$
C	$\frac{1}{2} + \frac{2}{4} = \frac{1}{2} + \frac{1}{2} = 1$ -----	1
F	$\frac{5}{34} + \frac{1}{17} =$	
I	$1 + \frac{3}{4} + \frac{3}{8} =$	
N	$6 - \frac{1}{10} =$	
O	$\frac{25}{5} - \frac{1}{2} =$	
R	$\frac{4}{68} + \frac{1}{17} + \frac{4}{34} =$	
S	$\frac{5}{1/2} =$	
T	$\frac{3}{2} + \frac{1}{4} =$	

Now put your answers in ascending order (low to high) and place the letter of each answer in the boxes below.

		$\frac{9}{34}$		$\frac{7}{4}$				
		A		T				