Homework (Due Jan 23,2011)

Math III:

1. 10 pages of powerpoint worksheets. Please print out the sheets and work independently. To be handed in 1/23/2011. Please make sure your name and public school grade are on the worksheet.
2. Elementary math Olympiad booklet Chapter 4: Finding a Pattern, # 6-10, #16-20.

Math IV:

1. 10 pages of powerpoint worksheets. Please print out and work independently. To be handed in 1/23/2011. Please make sure your name and public school grade are on the worksheet.
2. Elementary math Olympiad from reader, chapter 4: Finding a pattern: #1-20.

Add.

1.	2.	3.	4.	5.
4	8	2	7	12
9	1	18	19	36
15	12	17	8	14
6	6	4	23	5
2	11	3	11	7
+ 3	+ 9	+ 11	+ 6	+ 28

6.	7.	8.	9.	10.
57	16	83	459	273
142	351	172	115	46
31	229	95	356	311
+ 265	+ 593	+ 614	+ 542	+ 986

11.	12.	13.	14.	15.
152	78	4352	53271	96488
3649	1349	1679	165333	352567
6517	452	35341	495672	431
+ 836	+ 2415	+ 62487	+ 95126	+ 768259

Subtract.

16.	17.	18.	19.	20.
564	963	378	531	6611
− 321	− 452	− 139	− 67	− 4332

21.	22.	23.	24.	25.
9534	8056	6503	43512	59384
− 8826	− 3509	− 6417	− 29608	− 39565

26.	27.	28.	29.	30.
65003	72500	95036	145379	654042
− 49021	− 83095	− 30427	− 95084	− 293536

EXTRA PRACTICE 2
Multiplication and Division of Whole Numbers
Use after Sections 1.5 and 1.6 **Name**_____

1. 62×27
2. 55×21
3. 147×23
4. 327×29
5. 456×661
6. 977×649
7. 473×725
8. 1542×333
9. 5630×4222
10. 7459×5099
11. 6721×942
12. 9655×8176
13. 5278×29
14. 41699×122
15. 256×38
16. 2906×54

Divide and check.

17. $8\overline{)6890}$
18. $21\overline{)55}$
19. $35\overline{)79}$
20. $56\overline{)242}$
21. $47\overline{)546}$
22. $26\overline{)589}$
23. $59\overline{)3586}$
24. $129\overline{)561}$
25. $283\overline{)894}$
26. $748\overline{)7037}$
27. $788\overline{)5644}$
28. $916\overline{)9056}$
29. $2236\overline{)9692}$
30. $4921\overline{)5237}$
31. $3162\overline{)11971}$
32. $4938\overline{)54563}$

Ch. 4 Summary of Operations on Fractions

Problem	Need LCD?	What is LCD?	Rewrite	Evaluate
Think about what you need to do:	Yes if **adding** or **subtracting**, otherwise no.	N/A unless adding or subtracting	N/A if multiplying	Do the calculations and express your answer in **simplest** form.
$^2/_3 \div {}^2/_9$	No	N/A	$^2/_3 \cdot {}^9/_2$	$^2/_3 \cdot {}^9/_2 = \frac{2 \cdot 9}{3 \cdot 2} = \frac{2 \cdot 3 \cdot 3}{2 \cdot 3} = {}^3/_1 = 3$
$^3/_8 + {}^1/_6$	Yes	$8 = 2 \cdot 2 \cdot 2$ $6 = 2 \cdot 3$ $LCD = 2 \cdot 2 \cdot 2 \cdot 3$ $= 24$	$\frac{3 \cdot 3}{24} + \frac{1 \cdot 4}{24} =$ $^9/_{24} + {}^4/_{24}$	$^9/_{24} + {}^4/_{24} = \frac{9+4}{24} = {}^{13}/_{24}$
$^5/_9 - {}^1/_3$				
$^1/_{10} + {}^5/_{16}$				
$^2/_5 \cdot {}^7/_8$				
$^7/_{18} \div {}^{14}/_{21}$				

LPN Exam Preparation – Fractions

Find an equivalent expression for the given number, with the denominator indicated.
Use multiplication by 1.

1. $\frac{1}{2} = \frac{\quad}{10}$
2. $\frac{1}{6} = \frac{\quad}{12}$
3. $\frac{3}{4} = \frac{\quad}{48}$
4. $\frac{2}{9} = \frac{\quad}{18}$
5. $\frac{9}{10} = \frac{\quad}{30}$
6. $\frac{3}{8} = \frac{\quad}{48}$
7. $\frac{5}{12} = \frac{\quad}{48}$
8. $\frac{7}{8} = \frac{\quad}{56}$
9. $\frac{2}{5} = \frac{\quad}{25}$
10. $\frac{7}{8} = \frac{\quad}{32}$
11. $\frac{7}{11} = \frac{\quad}{33}$
12. $\frac{4}{3} = \frac{\quad}{18}$

Reduce the following fractions to lowest terms (simplify)

1. $\frac{2}{4}$
2. $\frac{3}{6}$
3. $\frac{6}{9}$
4. $\frac{8}{10}$
5. $\frac{24}{8}$
6. $\frac{8}{25}$
7. $\frac{26}{4}$
8. $\frac{36}{4}$
9. $\frac{27}{36}$
10. $\frac{30}{40}$
11. $\frac{150}{25}$
12. $\frac{180}{240}$

LPN Exam Preparation – Addition and Subtraction of Fractions

Add, and if possible, simplify.

1. $\frac{3}{5}+\frac{3}{4}$
2. $\frac{1}{4}+\frac{1}{4}$
3. $\frac{1}{8}+\frac{5}{8}$
4. $\frac{1}{6}+\frac{5}{6}$
5. $\frac{7}{12}+\frac{5}{12}$
6. $\frac{2}{9}+\frac{5}{9}$
7. $\frac{1}{8}+\frac{1}{6}$
8. $\frac{1}{9}+\frac{1}{6}$
9. $\frac{4}{5}+\frac{7}{10}$
10. $\frac{3}{4}+\frac{1}{12}$
11. $\frac{3}{20}+4$
12. $\frac{2}{15}+3$

Subtract the following fractions. Don't forget to simplify.

1. $\frac{5}{6}-\frac{1}{6}$
2. $\frac{5}{6}-\frac{1}{6}$
3. $\frac{11}{16}-\frac{15}{16}$
4. $\frac{7}{8}-\frac{1}{16}$
5. $\frac{7}{15}-\frac{4}{5}$
6. $\frac{3}{4}-\frac{3}{28}$
7. $\frac{6}{10}-\frac{7}{100}$
8. $\frac{3}{5}-\frac{1}{2}$
9. $\frac{3}{4}-\frac{1}{2}$
10. $\frac{4}{7}-\frac{1}{3}$
11. $\frac{5}{6}-\frac{2}{3}$
12. $\frac{8}{25}-\frac{29}{150}$

LPN Exam Preparation – Multiply and DivideFractions

Multiply. Don't forget to simplify.

1. $\frac{3}{8} \bullet \frac{5}{3}$
2. $\frac{4}{5} \times \frac{1}{4}$
3. $\frac{7}{8} \times \frac{1}{7}$
4. $\frac{1}{8} \bullet \frac{6}{5}$
5. $\frac{2}{5} \times \frac{1}{12}$
6. $\frac{1}{6} \times \frac{3}{4}$
7. $\frac{3}{6} \times \frac{1}{6}$
8. $\frac{5}{9} \times \frac{7}{5}$
9. $\frac{25}{4} \times \frac{4}{3}$
10. $\frac{1}{4} \bullet 8$
11. $12 \times \frac{3}{4}$
12. $15 \times \frac{1}{3}$

Divide the following fractions. Don't forget to simplify.

1. $\frac{3}{5} \div \frac{3}{4}$
2. $\frac{2}{3} \div \frac{3}{4}$
3. $\frac{5}{3} \div \frac{4}{9}$
4. $\frac{1}{3} \div \frac{1}{6}$
5. $\frac{10}{9} \div \frac{1}{2}$
6. $\frac{1}{4} \div \frac{1}{5}$
7. $\frac{7}{6} \div \frac{5}{3}$
8. $\frac{3}{8} \div 24$
9. $\frac{12}{7} \div \frac{4}{3}$
10. $24 \div \frac{3}{8}$
11. $12 \div \frac{3}{2}$
12. $40 \div \frac{2}{3}$

EXTRA PRACTICE 18
Operations with Mixed Numerals
Use after Sections 4.6 and 4.7

Name_____

1. $5+4\frac{5}{7}=$ _____
2. $1\frac{2}{5}\times 2\frac{1}{3}=$ _____
3. $2\frac{1}{4}+6\frac{1}{4}=$ _____
4. $3\frac{1}{2}\div 2=$ _____
5. $6\frac{4}{5}-3\frac{2}{3}=$ _____
6. $5\frac{3}{4}\cdot 1\frac{3}{5}=$ _____
7. $10\frac{1}{6}+3\frac{2}{3}=$ _____
8. $12\div 1\frac{1}{2}=$ _____
9. $9\frac{2}{7}-4\frac{4}{7}=$ _____
10. $8\frac{4}{5}+1\frac{2}{5}=$ _____
11. $3\frac{1}{4}\cdot 5\frac{3}{4}=$ _____
12. $6\frac{7}{11}+5\frac{4}{11}=$ _____
13. $11\frac{5}{8}-5\frac{5}{8}=$ _____
14. $10\frac{5}{6}-4\frac{3}{4}=$ _____
15. $13\frac{1}{3}-7\frac{3}{4}=$ _____
16. $8-3\frac{13}{16}=$ _____
17. $12\frac{5}{8}+4\frac{3}{4}=$ _____
18. $6\frac{2}{3}\cdot 5\frac{1}{4}=$ _____
19. $9\frac{3}{8}\div 1\frac{5}{6}=$ _____
20. $5\frac{1}{2}\div 5\frac{1}{2}=$ _____
21. $0\times 76\frac{5}{9}=$ _____
22. $26\frac{1}{2}+14\frac{7}{8}=$ _____
23. $45\frac{1}{6}-8\frac{5}{8}=$ _____
24. $58\frac{4}{7}-10=$ _____
25. $67-5\frac{4}{5}=$ _____
26. $35\frac{2}{7}-21\frac{2}{3}=$ _____
27. $0\div 65\frac{2}{3}=$ _____
28. $7\frac{5}{6}\div 10=$ _____
29. $75\frac{2}{3}-48\frac{7}{9}=$ _____
30. $15\frac{5}{6}\cdot 8\frac{1}{10}=$ _____

Prime Factorization

(Answer ID # 0627951)

Find the prime factorization of each number.

1. 30

2,3,5

2. 22

3. 24

4. 26

5. 20

6. 10

7. 18

8. 78

9. 28

10. 74

11. 76

12. 144

13. 80

14. 14

15. 6

16. 56

17. 42

18. 48

Number Theory

(Answer ID # 0416863)

Complete each divisibility table. Write yes if the number is divisible by the given number. Write no if it is not divisible by the given number.

1. **270** by 5 _____ by 6 _____ by 7 _____ by 9 _____ by 10 _____	2. **1,008** by 3 _____ by 4 _____ by 7 _____ by 8 _____ by 10 _____	3. **87,429** by 5 _____ by 6 _____ by 7 _____ by 9 _____ by 10 _____	4. **756** by 3 _____ by 4 _____ by 6 _____ by 7 _____ by 8 _____
5. **36** by 3 _____ by 5 _____ by 6 _____ by 9 _____ by 10 _____	6. **63,566** by 3 _____ by 4 _____ by 5 _____ by 9 _____ by 10 _____	7. **108** by 2 _____ by 4 _____ by 5 _____ by 6 _____ by 8 _____	8. **863** by 3 _____ by 4 _____ by 5 _____ by 9 _____ by 13 _____
9. **90** by 3 _____ by 5 _____ by 6 _____ by 8 _____ by 11 _____	10. **32,937** by 2 _____ by 4 _____ by 6 _____ by 8 _____ by 12 _____	11. **6,745** by 5 _____ by 8 _____ by 9 _____ by 12 _____ by 13 _____	12. **93** by 2 _____ by 4 _____ by 8 _____ by 9 _____ by 13 _____
13. **9,647** by 2 _____ by 3 _____ by 4 _____ by 6 _____ by 10 _____	14. **57** by 6 _____ by 7 _____ by 8 _____ by 9 _____ by 13 _____	15. **794** by 2 _____ by 3 _____ by 10 _____ by 11 _____ by 13 _____	16. **280** by 4 _____ by 10 _____ by 11 _____ by 12 _____ by 13 _____

Number Theory

(Answer ID # 0927178)

Classify each number as prime or composite.

1. **69** ☐ Prime ☐ Composite	2. **20** ☐ Prime ☐ Composite	3. **11** ☐ Prime ☐ Composite	4. **16** ☐ Prime ☐ Composite

Complete each divisibility table. Write yes if the number is divisible by the given number. Write no if it is not divisible by the given number.

5. **1,152** by 3 _____ by 4 _____ by 5 _____ by 6 _____ by 9 _____	6. **70** by 2 _____ by 5 _____ by 7 _____ by 8 _____ by 9 _____	7. **5,396** by 2 _____ by 3 _____ by 4 _____ by 11 _____ by 13 _____	8. **745** by 4 _____ by 7 _____ by 8 _____ by 9 _____ by 10 _____

Use the clue to fill in the missing digit.

9. The number 11☐ is divisible by 6.	10. The number 9☐52 is divisible by 13.

List all of the factors of each number.

11. 42	12. 20	13. 70	14. 86