Math 6+/7+ Unit 2 GCF/LCM Review Study Guide Name:

***Divisibility**

Tell whether each number is divisible by 2, 3, 4, 5, 6, 9, and 10.

1. 836 — 2, 4
2. 670 — 2, 5, 10
3. 312 — 2, 3, 4, 6

Tell whether each number is prime or composite.

4. 36 — C
5. 111 — C
6. 53 — P

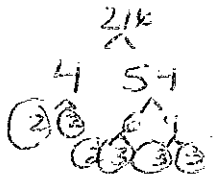
***Factors and Prime Factorization**

List all the factors of each number.

7. 36 — 1x36 2x18 3x12 4x9 6x6
8. 72 — 1x72 2x36 3x24 4x18 6x12 8x9
9. 53 — 1x53

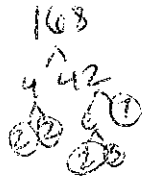
Write the prime factorization of each number.

10. 675 — $3^3 \times 5^2$
11. 90 — $2 \times 5 \times 3^2$
12. 112 — $2^4 \times 7$

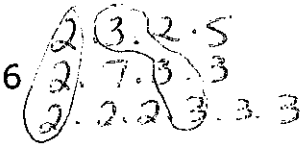


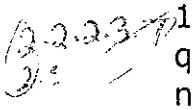
***Greatest Common Factor**

Find the greatest common factor of each set of numbers.



13. 168 and 70 — 14
14. 72 and 60 — 12
15. 60, 126, and 216 — 6





16. Diane canned 18 quarts of peaches, 15 quarts of apricots, and 12 quarts of plums. She would like to place the quarts into the greatest number of boxes so that each box has the same number of quarts of each kind of fruit. How many boxes does she need? GCF (3)

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***Least Common Multiple**

List the multiples of each number to help you find the least common multiple of each group.

17. 24 and 8

LCM: 24

18. 4 and 6

LCM: 12

19. 4 and 10

LCM: 20

20. 2, 5, and 6

LCM: 30

21. 3, 4, and 9

LCM: 36

3
$2 \cdot 2$
$3 \cdot 3$

22. 8 and 10

LCM: 40

23. John goes to the store every 4 days. Sue goes to the store every 5 days. If they both go today, in how many days will they go again? 20 days

For questions 24-25, convert the following fractions to decimals.

24. $\frac{5}{8} = \frac{625}{1000}$ 0.625

25. $\frac{5}{6}$ $0.8\overline{3}$

For questions 26-28, write the decimals as fractions in simplest form.

26. $0.888\ldots$ $0.\overline{8}$ $\frac{8}{9}$ $\frac{888}{999}$

27. 0.005 $\frac{5}{1000} = \frac{1}{200}$

28. 4.56 $4\frac{56}{100} = 4\frac{14}{25}$

For questions 29-37, solve. Show all of your work.

29. 0.76 + 2.24 3

30. (-7) - 0.4
$-7 + -0.4$ -7.4

31. 0.012 * 0.006 0.000072

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32. $4.53 \div (-3)$ -1.51

33. $4\frac{1}{9} - 2\frac{1}{2}$ $4\frac{1}{9} = 4\frac{2}{18} = 3\frac{20}{18}$ $-2\frac{1}{2} = 2\frac{9}{18} = 2\frac{9}{18}$ $1\frac{11}{18}$

34. $-\frac{4}{5} * -1\frac{1}{3}$ $\frac{4}{5} \times \frac{4}{3} = \frac{16}{15} = 1\frac{1}{15}$

35. $3\frac{1}{3} \div (-1\frac{5}{12})$ $\frac{10}{3} \div \frac{17}{12}$ $\frac{10}{3} \times \frac{12^4}{17} = \frac{40}{17} = 2\frac{6}{17}$

36. $1\frac{7}{10} + 3\frac{3}{4}$ $1\frac{7}{10} = 1\frac{14}{20}$ $+3\frac{3}{4} = 3\frac{15}{20}$ $4\frac{29}{20} = 5\frac{9}{20}$

37. $-\frac{2}{3} - \frac{3}{8}$ $-\frac{2}{3} + \frac{-3}{8}$ $\frac{-16}{24} + \frac{-9}{24} = \frac{-25}{24} = -1\frac{1}{24}$

For 38-40, use what you know about square and cube roots to solve.

38. $\sqrt{64} + \sqrt{144} =$ $8 + 12 = 20$

39. $\sqrt[3]{125} + \sqrt[3]{8} =$ $5 + 2 = 7$

40. $\sqrt[3]{27} - \sqrt{1} =$ $3 - 1 = 2$

For questions 41 and 42, estimate the square root.

41. $\sqrt{70} \approx 8$

42. $\sqrt{31} \approx 5$ or 6

43. $-3, -1.5, -\frac{3}{4}, \frac{1}{24}, \sqrt{1}$