

Dear students,

To prepare you for next year's Algebra 1A class, the Math Department requires that you complete a summer review assignment. This review will refresh your skills and prepare you for our Algebra 1A course.

Solve each problem, **showing all your work**. You are expected to spend a minimum of 2 hours on this assignment, but it may require as many as 4 hours if you are not familiar with the material. ALL problems need to be done with all work shown, neat, and stapled. You may print out the summer review and complete the problems on the document itself, or complete the problems on binder paper. The completed assignment is due the first day of class. We will quickly review the assignment on that day, so bring any questions you may have to the first class. We will be having an assessment on this material in the second class, so I would encourage you to review your work the day before classes start to have it fresh in your mind if you completed the assignment early in the summer. All problems on this review should be material that you have already mastered. If there is anything that does not look familiar, please make sure you get the proper help during the summer.

A great resource to help you with any concepts you may be struggling with is Khan Academy.

If you have any questions, you may reach out to the Math Department Chair, Ms. Riley, at: **criley@moreaucatholic.org**

See you in August!

Name: \_\_\_\_\_

**Follow the directions for each question and box your final answer.**

Find the prime factorization of each number by creating a prime factor tree.

1) 54

2) 72

3) 252

Find the greatest common factor of each set of numbers.

4) 12 and 18

5) 25 and 35

6) 36 and 48

7) 40, 80, and 100

Find the least common multiple of each set of numbers.

8) 5 and 15

9) 11 and 44

10) 8 and 9

11) 12 and 18

Write the fraction in simplest (reduced) form.

12)  $\frac{12}{15}$

13)  $\frac{20}{28}$

14)  $\frac{24}{32}$

15)  $\frac{48}{52}$

Write each mixed number as an improper fraction.

16)  $2\frac{1}{3}$

17)  $8\frac{3}{4}$

18)  $1\frac{9}{10}$

Add the fractions and put in simplest form.

19)  $\frac{3}{4} + \frac{1}{2}$

20)  $\frac{1}{3} + \frac{2}{3}$

21)  $\frac{2}{5} + \frac{1}{6}$

22)  $\frac{3}{10} + \frac{3}{4}$

23)  $\frac{4}{9} + \frac{2}{3}$

24)  $\frac{1}{8} + \frac{3}{8}$

Subtract the fractions and put in simplest form.

25)  $\frac{9}{10} - \frac{3}{10}$

26)  $\frac{2}{3} - \frac{1}{5}$

27)  $\frac{19}{20} - \frac{3}{4}$

28)  $\frac{13}{15} - \frac{1}{3}$

29)  $\frac{9}{8} - \frac{1}{8}$

30)  $1\frac{3}{8} - \frac{1}{4}$

Multiply the fractions and put in simplest form.

31)  $\frac{2}{3} \cdot \frac{1}{8}$

32)  $\frac{9}{10} \cdot \frac{20}{27}$

33)  $\frac{2}{5} \cdot \frac{3}{4}$

Divide the fractions and put in simplest form.

34)  $\frac{9}{20} \div \frac{3}{5}$

35)  $\frac{1}{2} \div \frac{3}{4}$

36)  $\frac{7}{8} \div \frac{7}{10}$

Use order of operations to simplify the expression.

37)  $6 + 10 \div 2 \cdot 8$

38)  $9 - 10 \div 2 + 3$

39)  $15 - (10 + 12 \div 3)$

40)  $(11 - 36 \div 12) + (1 + 2 \cdot 2)$

Simplify.

41)  $-10+3$

42)  $-7+(-8)$

43)  $-1+9$

44)  $-2-2$

45)  $-9+9$

46)  $-9-(-7)$

47)  $2-10$

48)  $-3-16$

49)  $3-(-4)$

50)  $-3\cdot 2$

51)  $-7\cdot(-3)$

52)  $-24\div(-6)$

53)  $42\div(-3)$

Simplify the expression by combining like terms.

54)  $2x+3+9x+7$

55)  $3-5x-10+6x$

56)  $-5+2x+3y-9+4y$

57)  $2-3x-4y-8-2x-6y$

58)  $12x-6-10x+11$

59)  $1-8x+2y+15x$

60)  $2y+3x-20y+6x$