

Name: _____ Block _____

MAT750 - Intro to Algebra Summer Review Packet

Problems 1 to 29 cover material that you should know prior to this course.

Problems 30 to 50 cover material from Chapter 1 of our book.

A test will be given on the material from Chapter 1 during the first week of the semester

Show work when possible. Do not use a calculator.

1. Add $5.92 + 7.071$.

2. Subtract $45.23 - 38.75$.

3. Multiply 4.21×3.6

4. Divide $0.144 \div 0.6$.

5. List all the factors of 30.

6. Write the prime factorization of 120.

7. List all the common factors of 25 and 135.

8. Find the greatest common factor of 84 and 60.

9. Find the least common multiple of 6 and 9.

10. Find the least common denominator of $\frac{5}{8}$ and $\frac{13}{20}$.

11. Simplify the fraction $\frac{18}{24}$.

12. Rewrite the improper fraction $\frac{19}{5}$ as a mixed number.

13. Rewrite the mixed number $7\frac{2}{5}$ as an improper fraction.

14. Find the reciprocal of $5\frac{1}{4}$.

15. Add $6\frac{3}{8} + 9\frac{1}{6}$. Write the answer as a fraction or a mixed number in simplest form.

16. Subtract $8\frac{3}{5} - 5\frac{1}{3}$. Write the answer as a fraction or a mixed number in simplest form.

17. Multiply $2\frac{2}{9} \times 3\frac{1}{4}$. Write the answer as a fraction or a mixed number in simplest form.

18. Divide $\frac{3}{10} \div \frac{9}{25}$. Write the answer as a fraction or a mixed number in simplest form.

19. Write the fraction $\frac{4}{9}$ as a decimal.

20. Write 62% as a decimal and as a fraction in simplest form.

21. Write 0.05 as a percent and as a fraction in simplest form.

22. Write $\frac{5}{8}$ as a decimal and as a percent.

23. Compare -7.45 and -7.4 using $<$, $>$, or $=$.

24. Compare $\frac{15}{9}$ and $1\frac{2}{3}$ using $<$, $>$, or $=$.

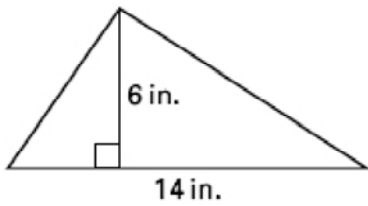
25. Write the numbers $\frac{2}{5}$, $\frac{7}{20}$ and $\frac{3}{10}$ in order from least to greatest.

26. Write the numbers -3.1 , -2.8 , -3.4 , and 2.7 in order from least to greatest.

27. Find the perimeter of a rectangle with length 12 feet and width 5 feet.

28. Find the area of a square with sides of length 9 yards.

29. Find the area of the triangle.



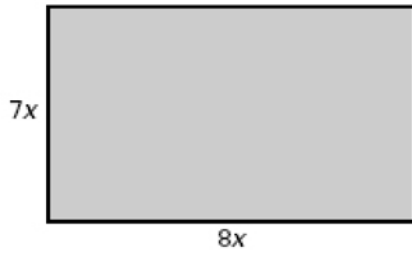
Evaluate the expression for the given value of the variable.

30. $25q$ when $q = 6$

31. $\frac{16}{x}$ when $x = 2$

32. If you drive at an average speed of 65 miles per hour for 4 hours, how far do you travel?

33. The area of a rectangle is the product of its length and width. Find the area of the rectangle below.



Evaluate the expression for the given value of the variable.

34. n^3 when $n = 4$

35. $(2x)^4$ when $x = 2$

36. $8 + 5a^2$ when $a = 7$

37. $64 - \frac{32}{b}$ when $b = 4$

Evaluate the expression for the given values of the variables.

38. $x + y^2$ when $x = 5$ and $y = 9$

39. $(a - b)^4$ when $a = 10$ and $b = 6$

Evaluate the expression.

40. $49 \div 7 + 3 \cdot 6$

41. $4[(29 - 12) + 10]$

42. $[44 \div (10 - 8)^2] + 7$

43. $\frac{1}{2} \cdot 18 - 3^2$

Check whether the given number is a solution of the equation or inequality.

44. $16x + 3 = 29 - 3x$; 2

45. $10x - 4 \leq 20$; 5

Write the verbal phrase as an algebraic expression. Use x for the variable in your expression.

46. A number increased by $\frac{1}{2}$

47. A number multiplied by $\frac{2}{3}$

Write the verbal sentence as an equation or an inequality.

48. Three is less than or equal to four minus a number.

49. The third power of two is eight.

50. A storage container is 22 inches long, 22 inches wide, and 20 inches deep. The volume of the container is the product of its length, width, and height. What is the volume of the container?