

Math Midterm

Instructions: Choose 3 adding/subtracting fractions problems using the area model.

Choose 3 multiplying fractions problems to answer using the area model.

Solve 1 multiplication problem using Lattice Method.

Solve 1 multiplication problem using Box Method (Partial Product).

Solve 1 multiplication problem using Area Model.

Solve 1 division problem using Partial Quotient (Long 7).

1. $10 - 8\frac{2}{5}$

2. $12\overline{)456}$

3. $16\overline{)1248}$

4. 605×76

5. $\frac{1}{2} + \frac{3}{4} =$

a. $1\frac{1}{4}$

b. $3\frac{2}{3}$

c. $\frac{4}{6}$

d. $\frac{2}{3}$

6. $68\overline{)719}$

7. $4.6 + 5.9 + 6.38 + 7.2$

a. 23.08

b. 23.18

c. 24.08

d. 24.97

8. $5\frac{3}{4} + 4\frac{7}{8}$

9. $6\frac{1}{5} - 2\frac{1}{2} =$

- a. $4\frac{1}{3}$
- b. $4\frac{3}{10}$
- c. $3\frac{1}{2}$
- d. $3\frac{7}{10}$

10. $0.93 + 9.3 + 93 + 930 =$

11. $9 \cdot 5 - 4(12 \div 6)$

12. $12.01 - 4.99 =$

13. $45.6 + 12.35$

14. Write 85.043 in expanded form.

15. Write 4.945 in expanded form.

- a. $4 + .9 + .04 + .005$
- b. $4 + 9 + 40 + 500$
- c. $40 + 9 + 4 + .005$

16. 0.905 () 0.905

- a. $>$
- b. $<$
- c. $=$

17. Order from least to greatest

$9.82 / 9.5 / 9.02$

18. Round 5.5252 to the nearest ones

19. $(10 + 6) \div 2$

20. Round the decimal to the nearest whole number.

31.95

21. $3 \star (7 - 6) \star 7$

22. $3.4 + 5 = n$

- a. 3.9
- b. 8.4
- c. 2.4
- d. 8

23. Which number is equivalent to seventeen thousandths?

- a. 0.0017
- b. 0.017
- c. 0.17
- d. 1,700

24. Carrie's coach asked her to run to the end of the field and back. It took her 23.4 seconds to run to the end and 50.9 seconds to run back. How many seconds did the whole trip take?

- a. 74.3
- b. 84.3
- c. 73.13
- d. 27.5

25. $\frac{7}{10} \times \frac{5}{8} =$

26. $\frac{9}{10} \times \frac{2}{3} =$

27. Round to the nearest tenth.

3.945

28. $\frac{1}{2} + \frac{3}{4}$

- a. $\frac{5}{6}$
- b. $\frac{3}{6}$
- c. $\frac{1}{2}$
- d. $\frac{5}{4}$

29. $5.25 \div .05$

- a. 10
- b. 100
- c. 105
- d. 110

30. Leo wrote $\frac{2}{10}$ of the songs for a concert. Kim wrote $\frac{3}{10}$ of the songs for the same concert. What fraction of the total number of songs for the concert did Leo and Kim write?

- a. $\frac{5}{10}$
- b. $\frac{1}{2}$
- c. $\frac{1}{10}$
- d. $\frac{5}{20}$

31. Look at the fractions below.

$$\frac{13}{16}, \frac{5}{8}, \frac{3}{16}, \frac{3}{4}, \frac{7}{8}$$

Which lists these fractions from least to greatest?

- a. $\frac{7}{8}, \frac{13}{16}, \frac{3}{4}, \frac{5}{8}, \frac{3}{16}$
- b. $\frac{3}{4}, \frac{5}{8}, \frac{3}{16}, \frac{13}{16}, \frac{7}{8}$
- c. $\frac{7}{8}, \frac{5}{8}, \frac{3}{4}, \frac{13}{16}, \frac{3}{16}$
- d. $\frac{3}{16}, \frac{5}{8}, \frac{3}{4}, \frac{13}{16}, \frac{7}{8}$

32. Simplify: $5 + 15 \div (3 + 2)$

33. Find the difference of $2\frac{1}{5} - \frac{1}{3}$

34. $7\frac{4}{5} - 3\frac{2}{10}$

35. $\frac{1}{8} + \frac{1}{2}$

36. $\frac{4}{9} \times \frac{2}{3}$

37. $24 - \frac{14}{9}$

38. Find each product.

$3 \times 7 = \underline{\hspace{2cm}}$

$3 \times 70 = \underline{\hspace{2cm}}$

$3 \times 700 = \underline{\hspace{2cm}}$

39. Which of the following is true?

a. $0.310 < 0.275$

b. $0.325 > 0.310$

c. $0.325 < 0.275$

d. $0.310 > 0.325$

40. $\frac{1}{2} + \frac{3}{10} =$

- a. $\frac{1}{5}$
- b. $\frac{4}{10}$
- c. $\frac{6}{10}$
- d. $\frac{4}{5}$

41. Imani has $\frac{2}{3}$ yard of fabric. Which fraction is equivalent to $\frac{2}{3}$?

- a. $\frac{8}{12}$
- b. $\frac{9}{12}$
- c. $\frac{12}{15}$
- d. $\frac{5}{6}$

42.
$$\begin{array}{r} 9.7 \\ x \ 13 \\ \hline \end{array}$$

43.
$$\begin{array}{r} 2.22 \\ x \ 4.2 \\ \hline \end{array}$$

44.
$$\begin{array}{r} 23.5 \\ x \ 3 \\ \hline \end{array}$$

45. $\frac{5}{6} - \frac{2}{9} =$

- a. $\frac{11}{18}$
- b. $\frac{7}{9}$
- c. $\frac{3}{18}$
- d. $\frac{7}{18}$

46. Change $16\frac{3}{5}$ to an improper fraction.

47. In one year, Melinda grew $2\frac{1}{4}$ inches to $48\frac{3}{8}$ inches. What was her height at the beginning of the year?

- a. $50\frac{5}{8}$ inches
- b. $46\frac{1}{8}$ inches
- c. $43\frac{1}{2}$ inches
- d. $21\frac{1}{2}$ inches
- e. $108\frac{27}{32}$ inches

48. Subtract:

$$\begin{array}{r} \frac{5}{8} \\ - \frac{1}{3} \\ \hline \end{array}$$

49. Find the value of the following expression:

$$2 + 8 \times (4 + 2) \div 3 - 6$$

50. Which symbol should you use to compare the following decimals?

$$13.506 \underline{\hspace{1cm}} 13.7$$

- a. <
- b. >
- c. =

51. $5 \times 4 - 20 \div 4$

52. Round to the nearest tenth.
98.23

53. 64.2×0.75

54. $\frac{8}{9} \times \frac{1}{2} =$

55. $\frac{5}{12} \times \frac{4}{5} =$

56. $\frac{7}{20} \times \frac{5}{6} =$

57. $\frac{8}{9} \times \frac{5}{6} =$

58. Which shows the following exponent: 10^3

- a. $10 \times 10 \times 10$
- b. 1,000,000
- c. 100
- d. $10 \times 10 \times 10 \times 10$

59. Last year it rained $2\frac{1}{2}$ in. in April and $1\frac{1}{3}$ in. in May. What is the total rainfall for the two months?
- a. $2\frac{10}{12}$ in.
 - b. $3\frac{2}{5}$ in.
 - c. $3\frac{5}{6}$ in.
 - d. $3\frac{1}{2}$ in.
60. A pitcher contains $3\frac{1}{2}$ quarts of milk. You pour $1\frac{7}{8}$ quarts into a smaller pitcher. How many quarts of milk are left in the first pitcher?
- a. $1\frac{3}{4}$ quarts
 - b. $1\frac{5}{8}$ quarts
 - c. $2\frac{5}{8}$ quarts
 - d. $2\frac{3}{4}$ quarts
61. The average speed of a three-toed sloth is 0.23 meters per second. What is 0.23 written as a fraction?
- a. $1/23$
 - b. $23/10$
 - c. $23/100$
 - d. $100/23$
62. 1.2×0.45
63. 7.2×5.49
64. $4.86 \div 0.6$

65. Four friends had lunch together. The total bill for lunch came to \$33.40, including tip. If they shared the bill equally, how much did they each pay?
66. $\frac{2}{3} + \frac{1}{2} =$
- $\frac{2}{3}$
 - $\frac{3}{5}$
 - $1\frac{1}{6}$
 - $\frac{7}{12}$
67. $8 - (3 \times 2) + 15 \div 3$ Which operation do you do first?
- Multiply
 - Divide
 - Parentheses
 - Subtract
68. Which of the following is equal to 13?
- $3 + (9/4) + 2 \times 5$
 - $3 + 9 / (4 - 2) \times 5$
 - $(3 + 9) / (4 + 2) \times 5$
 - $(3 + 9) / 4 + 2 \times 5$
69. Christopher rode his bike 3.15 miles on Friday and then 4.2 miles on Saturday. How many more miles did Christopher bike on Saturday?
- 1.50
 - 1.15
 - 1.05
 - 7.35
70. $10 \times \left[\left(7^2 + 3 \right) - 9 \right] = \underline{\hspace{2cm}}$
71. Mr. Jones bought 4 bunches of carrots and 3 bags of onions. There are 8 carrots in each bunch and 15 onions in each bag. Write an expression for the total number of carrots and onions he bought.
- $4 + 3 + 8 + 15$
 - $(4 \times 8) + (3 \times 15)$
 - $(4 \times 3) + (8 \times 15)$
 - $(4 \times 4) + (3 \times 3) + 23$

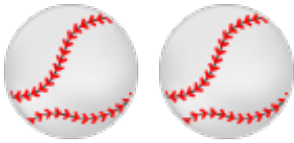
72. $20 \overline{)608}$

73. Choose $<$, $>$, or $=$.

10^4 _____ 10,000

- a. $<$
- b. $>$
- c. $=$

74. Travis and his three friends go to the baseball game. Each person buys a ticket for \$8, a snack for \$4, and a drink for \$2. Which numerical expression represents the total cost of the trip to the baseball game for Travis and his friends?



- a. $4 + (\$8 \times \$4 \times \$2)$
- b. $4 \times (\$8 + \$4 + \$2)$
- c. $(4 \times \$8) + (\$4 \times \$2)$
- d. $(4 \times \$8 + \$4) + (4 \times \$4 + \$4)$

75. A rectangular poster is $\frac{3}{5}$ meter long and $\frac{2}{5}$ meter wide.

What is the area, in square meters, of the poster?

Enter your fraction in the space provided.

76. A rectangular piece of cardboard has a length of $\frac{5}{6}$ foot and a width of $\frac{2}{3}$ foot. What is the area of the cardboard in square feet?



- a. $\frac{3}{2}$
- b. $\frac{5}{4}$
- c. $\frac{5}{9}$
- d. $\frac{7}{9}$