6.001

Student Name_____ Date_____

Notes

Multiply fractions

3 simple steps to multiply fractions:

Example: $\frac{1}{3} \times \frac{9}{16}$

Step 1

Multiply the numerator.

$\frac{1}{3} \times \frac{9}{16} =$

1 x 9 = 9

Step 2

Multiply the denominator.

$\frac{1}{3} \times \frac{9}{16} =$

3 x 16 = 48

Step 3

Simplify the fractions.

$\frac{9}{48} = \frac{3}{16}$

Fraction Division

3 simple steps to divide fractions: - Use KCF technique.

K- Keep fraction same

C- Change the sign

F- Flip the fraction

$$\frac{1}{2} \div \frac{1}{6}$$

$$\frac{1}{2} \times \frac{6}{1} = \frac{6}{2} = 3$$

1. Multiply and simplify.

$1.4 \times \frac{1}{5}$

$2.9 \times \frac{3}{24}$

3. $\frac{2}{3} \div \frac{9}{18}$

4. $\frac{9}{12} \div \frac{9}{8}$

5. $2\frac{1}{3} \times \frac{9}{21}$

6. $6\frac{4}{8} \times \frac{4}{24}$

7. $10\frac{1}{7} \div \frac{5}{7}$

8. $\mathbf{5\frac{1}{3} \div 2\frac{1}{6}}$

2. Dora walks $\frac{3}{10}$ of a mile to her fist job. At her second job, she has walked a total of $1\frac{2}{5}$ miles. What is the distance from the first job to the second job?

Show Your Work	Rough Work/Verify Work
Final Answer (With Units):	

3. A stack of boards is 28 inches high. Each board is $1\frac{3}{4}$ inches thick. How many boards are there?

Show Your Work	Rough Work/Verify Work
Final Answer (With Units):	

4. A bolt has $16\frac{1}{2}$ turns per inch. How many turns would be in $4\frac{1}{2}$ inches of threads?

Show Your Work	Rough Work/Verify Work
Final Answer (With Units):	

5. $\frac{3}{5}$ of class of 65 are boys. Find the number of girls in the class.

Show Your Work	Rough Work/Verify Work
Final Answer (With Units):	

6. Fifty divided by half minus twenty. What is the answer?

Show Your Work	Rough Work/Verify Work
Final Answer (With Units):	

7. 78 bags of nuts are to be divided among 13 students. Each bag contains 17 nuts. How many nuts will each student receive?

Show Your Work	Rough Work/Verify Work
Final Answer (With Units):	

8. A technician can repair 3 laptops every 4 hours. At this constant rate, how many minutes will it take the technician to repair 12 laptops?
   a. 800 minutes
   b. 960 minutes
   c. 120 minutes
   d. 400 minutes

9. A department store marked down the price of a designer coat by 25%. Two weeks later, they applied an additional 10% discount to the already reduced price. If the original price was $200, what is the final sale price?
   a. 130
   b. 135
   c. 140
   d. 150

10. Which expression represents "the sum of 8 and the product of 3 and a number n," decreased by the quotient of n and 2?

    a. $(8 + 3n) - \frac{n}{2}$
    b. $(8 + 3 + n) - 2n$
    c. $(8n + 3) - \frac{n}{2}$
    d. $(8 + 3n) \times \frac{n}{2}$

11. Which set contains only rational numbers that are greater than -0.6 and less than $\frac{4}{5}$?

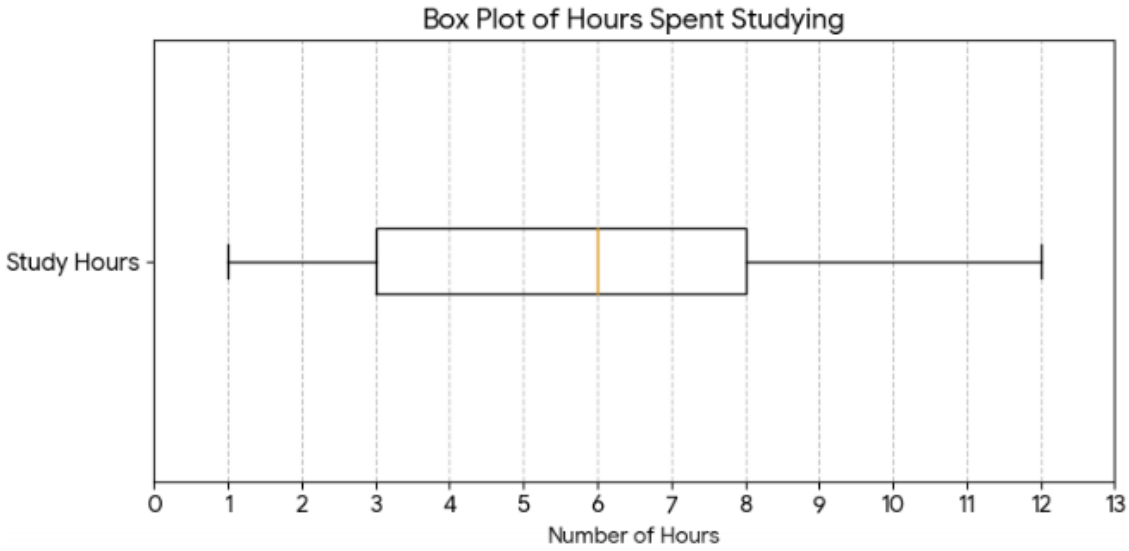
    A. $\{-0.7, 0, \frac{1}{2}, 0.9\}$

    B. $\{-0.55, -0.1, 0.75, \frac{2}{3}\}$

    C. $\{-1, -0.4, 0.2, 0.85\}$

    D. $\{-\frac{3}{5}, 0.1, \frac{3}{4}, 0.8\}$

12. The box plot below summarizes the number of hours students spent studying for a final exam.



Which statement is NOT supported by the data in the box plot?

a. The range of the data is 11 hours.
b. Exactly 50% of the students studied for 6 or more hours.
c. The interquartile range (IQR) is 5 hours.
d. 25% of the students studied for more than 8 hours.