Paramedic Program Pre-Admission Mathematics Test Study Guide

Table of Contents

Mathematical Definitions

Addition – To combine to increase number

Subtraction – To decrease in number by taking away from

Multiplication – To increase that many times over of a given number

Division – The splitting of a number into portions

Fraction – A numerical representation indicating the quotient of 2 numbers

- **Proper Fraction** – One in which the numerator is smaller than the denominator

- **Improper fraction** – One in which the numerator is either equal to or greater than the denominator. This means that an improper fraction has a value of one or greater than one.

Quotient – The number resulting from the division of one number by another.

Numerator – The part of the fraction above the line and signifies the number of parts of the denominator taken.

Denominator – The part of the fraction below the line signifying division that functions as the divisor of the numerator.

Divisor – The number by which a dividend is divided.

Dividend – The number to be divided.

Mixed Number – A number composed of an integer and a fraction.

Integer – Any of the neutral numbers, the negatives of these numbers, or zero

Neutral numbers – Whole numbers

Whole numbers – Any of the non-negative integers.

Decimals – Based on the number 10
A decimal to the right makes the number larger
A decimal to the left makes the number smaller

Product – The number or expression resulting from the multiplication together of two or more numbers or expressions

Reciprocal – To invert the numerator and denominator of a fraction

Arabic numerals – Any of the number symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

Roman numeral system – The Roman Number system is based on seven letters.
I = 1, **V** = 5, **X** = 10, **L** = 50, **C** = 100, **D** = 500, **M** = 1,000
Roman numeral rules:
- When a letter is repeated its value is repeated
- When a letter follows a letter of greater value, its added value is added to the greater value
- When a letter precedes a letter of greater value, its value is subtracted from the greater value

Rules for raising a fraction to higher terms

Rule: To raise a fraction to a higher denominator multiply both the numerator and the denominator by the same number that will give the desired denominator.

Problem: You wish to find out how many 36ths are equal to 0ne fourth

Solution: Since 4 is the denominator, we must ask ourselves 4 times what will equal 36. The answer is 9 therefore you should multiply both the numerator and denominator by 9.

Numerator – 1 times 9 = 9
Denominator – 4 times 9 = 36
Answer: 9/36

Note: Multiplying the numerator and the denominator of any fraction by the same number does not change its value.

Rules for reducing a fraction to its lowest terms

Rule: To reduce fractions, divide both the numerator and the denominator by the same number. The process is the opposite of raising the terms of a fracture. When working with fractions it is advisable to reduce fractions to their lowest terms.

Problem: You have the following fraction 6/24. To reduce this fraction to its lowest terms you must you **divide** both the numerator and the denominator by the highest number that can be divided evenly into both.

First: Determine what numbers can be divided into the numerator 6
    Answer: 1, 2, 3, and **6**
Second: Determine what numbers can be divided into the denominator 24
    Answer: 1, 2, 3, 4, **6**, 8, 12, and 24

Numerator – 6 divided by 6 = 1
Denominator – 24 divided by 6 = 4
Answer: 1/4

Changing whole numbers into fractions

Rule: To write the whole number as a fraction make the whole number the numerator and place it over the number one which is the denominator.

Example: Whole number is 7. Place 7 0ver 1
Answer: 7/1

To raise this fraction to a higher term using the number 8 for example would be written as follows:

Numerator: 7 times 8 = 56
Denominator: 1 times 8 =8
Answer: 56/8

Changing a fraction to a mixed number

Rule: Divide the denominator into the numerator

Example: 41/3
Solution: Numerator 41 is divided by denominator 3 which = 13 with a remainder of 2
13 becomes the whole number
The remainder of 2 becomes the numerator and 3 remains a denominator
Answer: 13 and 2/3

Changing a mixed number to a fraction

Rule: Multiply the denominator by the whole number and then take that number and add the numerator it. This will give you your numerator and the denominator stays the same.

Example: 7 and 2/5
Solution: Multiply the denominator 5 by the whole number 7 and this equals 35.
Add 35 plus the numerator of to which equals 37.
7 is the numerator and the initial denominator of 5 remains 5
Answer: 37/5

Addition of fractions

Fractions are called like fractions when they have the same denominators.

Rule: To add like fractions, add the numerators and then place the sum over the denominators. The denominator stays the same.

Example: ¼ + ¾ = 4/4

Rule: To add unlike fractions, change the given fractions to their equivalent fractions, so that they all have the same denominator. Then add the numerators and place the sum over the common denominator.

Example: 5/8 + 5/6
Find the least common denominator:
(The first and lowest number that both denominators will go into)

Denominator 8 = 8, 16, **24**, 32, etc.
Denominator 6 = 6, 12, 18, **24**, 30, etc.

The least common denominator of 8 and 6 is **24**

5/8 = X/24
Divide 24 by 8 and this equals 3
Then multiply 3 by the numerator 5 and this equals 15
X = 15
15/24

5/6=X/24
Divide 24 by 6 and this equals 4
Then multiply 4 by the numerator 5 and this equals 20
X = 20
20/24

Now you can add these fractions:

15/24 + 20/24 = 35/24

You can now change this fraction to a mixed number as follows:

Divide the numerator 35 by the denominator 24, which equals 1 and 11/12

Answer: 1 and 11/12

Addition of mixed numbers

Rule: To add mixed numbers, treat the fractions separately, then add the results to the whole numbers.

Example: 5 and 3/4 + 9 and 5/8 =
The denominators are different so you must first find the least common denominator of both of the denominators

Example: 3/4 + 5/8
      Find the least common denominator:
      (The first and lowest number that both denominators will go into)

Denominator 4 = 4, **8**, 16, 24, 32, etc.
Denominator 8 = **8**, 16, 24, 32, etc.

The least common denominator of 4 and 8 **is 8**

3/4 = X/8
Divide 8 by 4 and this equals 2
Then multiply 2 by the numerator 3 and this equals 6
X = 6
6/8

5/8 – X/8
Divide 8 by 8 and this equals 1
Then multiply 1 by the numerator 5 and this equals 5
X = 5
5/8

Now you are ready to add
5 and 3/4 now equals 5 and 6/8
9 and 5/8 now equals 9 and 5/8

5 and 6/8
+
9 and 5/8

14 and 11/8 – Now change 11/8 into a mixed number since the numerator is larger than the denominator.

Divide the numerator 11 by the denominator 8, which equals 1 with a remainder of .38

1 becomes the whole number, the .38 becomes the numerator and the denominator of 8 remains the same. This gives you a total of **1 and .38/8**

Next: Take the whole number 14 and add it to 1 and .38/8 which = **15 and .38/8**

Subtraction of fractions

In order to subtract one fraction from another you must, have like fractions meaning that the denominators are all the same.

Rule: To <u>subtract like fractions,</u> subtract the numerators and place the difference over the denominators.

Example: Subtract 3/6 from 8/6 as follows
8/6
-
3/6

5/6

Rule: To subtract unlike fractions, find their least common denominators, and then find the difference between the new numerators.

Example: Subtract 7/16 from 15/8
   Find the least common denominator:
  (The first and lowest number that both denominators will go into)

Denominator 4 = 4, 8, **16**, 24, 32, etc.
Denominator 8 = 8, **16**, 24, 32, etc.

The least common denominator of 8 and 16 **is 16**

7/16 = X/16
Divide 16 by 16 and this equals 1
Then multiply 1 by the numerator 7 and this equals 7
X = 7
7/16

15/8 – X/16
Divide 16 by 8 and this equals 2
Then multiply 2 by the numerator 15 and this equals 30
X = 30
30/16

Now you are ready to subtract
7/16 now equals 7/16
15/8 now equals 30/16

30/16
-
7/16

23/16

Subtraction of mixed numbers

Rule: To subtract mixed numbers, the fraction of the top number must be larger than the fraction of the bottom number.

Example:
Because there is not a fractional portion after the whole number 5 you must create one in order to be able to do the subtraction.

Procedure for changing the whole number 5 into a mixed number:
Take 1 away from the 5 and change it into a fraction equivalent to 1 which would be 2/2
Since you took one whole number away from the 5 the 5 now becomes a 4 and you have a whole number of 4
You now have the following mixed number: 4 and 2/2

Now you can do the subtraction problem
4 and 2/2
-
2 and 1/2
_____
2 and 1/2 - answer

Rule: In order to subtract mixed numbers with unlike denominators you first must first convert the fractions so that they have like denominators.

Example: Subtract 1 and 7/16 from 2 and 3/4
      Find the least common denominator:
      (The first and lowest number that both denominators will go into)

Denominator 4 = 4, 8, **16**, 24, 32, etc.
Denominator 8 = 8, **16**, 24, 32, etc.

The least common denominator of 4 and 16 is **16**

7/16 = X/16
Divide 16 by 16 and this equals 1
Then multiply 1 by the numerator 7 and this equals 7
X = 7
7/16

3/4 = X/16
Divide 16 by 4 and this equals 4
Then multiply 4 by the numerator 3 and this equals 12
X = 12
12/16

Next:
2 and 12/16
-
1 and 7/16
_____
1 and 5/16

Multiplying a fraction by a fraction

Rule: Multiply the numerators to get the new numerator
Multiply the denominators to get the new denominator
Then change the fraction to its simplest term

2/3 times 3/5 is set up as follows:

Numerator 2 times numerator 3 = 6
Denominator 3 times denominator 5 = 15
Answer 6/15

Multiplying a whole number by a fraction

Rule: Multiply the numerator of the fraction by the whole number and then place the product over the denominator.

Example: 3/4 times 18 – 18 must be changed to a fraction and this is done by placing a one as the denominator under the whole number 18.

Problem setup: 3 X 18 = 54
4 X 1 = 4
Answer 54/4 – Reduce to lowest terms -change to a mixed fraction

Solution: Divide the numerator 54 by 4 and this equals 13 with a remainder of 2. 13 is the whole number and 2 becomes the numerator. 4 remains the denominator.

Answer: 13 and 2/4

Multiplication of whole numbers by a mixed number

Example: 6 times 3 and ¾
Change 3 and ¾ to an improper fraction by multiplying the denominator 4 by the whole number 3, which equals 12. Next add 12 to the numerator 3 and that gives you a total of 15. 15 becomes the numerator and the denominator 4 stays 4.

The new improper fraction created is 15/4.

Next: Make the whole number 6 a fraction by placing a 1 beneath it as the denominator.

Set up the equation:

Numerator 6 times numerator 15 = 90
Denominator 1 times denominator 4 = 4
Answer - 15/4
Next: Change 15/4 to a mixed number by dividing 15 by 4, which equals 3 with a remainder of 3

3 is the whole number and the remainder of 3 becomes the numerator. The denominator of 4 remains 4.

Answer: 3 and 3/4

Multiplying mixed numbers

Rule: Change both mixed numbers to improper fractions.
Next multiply numerator by numerator and this gives you the new numerator
Then multiply denominator by denominator and this gives you the new denominator

Example: 2 and 2/3 times 1 and ½

Change the mixed number 2 and 2/3 to a fraction. Multiply the denominator 3 by the whole number 2, which comes to 6. Next add 6 to the numerator 2 which comes to 8. 8 is the new numerator and the denominator 3 remains 3. The fraction is written as 8/3.

Change the mixed number 1 and 1/2 to a fraction. Multiply the denominator 2 by the whole number 1, which comes to 2. Next add 2 to the numerator 1 which comes to 3. 3 is the new numerator and the denominator 2 remains 2. The fraction is written as 3/2.

Now you are ready to multiply the numerators. Take the numerator 8 and multiply it by the numerator 3, which comes to 24. The new numerator is 24.

Now you are ready to multiply the denominators. Take the denominator 3 and multiply it by the denominator 2, which comes to 6. The new denominator is 6.

You now have the fraction 24/6 and you need to reduce it by finding the least common denominator being the largest number that will go into both numbers.

24 – 1, 2, 3, 4, **6**, 8, 12, 24
6 – 1, 2, 3, **6**

Divide the numerator 24 by the least common denominator 6 and this equals 4
Next divide the numerator 6 by the least common denominator 6 and this equals 1

Answer 4/1 = 4 - Divide the numerator 4 by the denominator 1 and you get 4

Division of Fractions

Rule: To divide by a fraction you will need to invert the divisor and multiply by the reciprocal. The reciprocal is an inverted number. Example ½ inverted becomes 2/1. The reciprocal is 2/1.

Example: 12 divided by 2 equals 6

 The 2 is equal to 2/1 as a fraction. To divide this fraction you must invert the divisor making the fraction ½ and the multiply by 12.

12 should be turned into a fraction by putting a 1 beneath it as the denominator

Numerator 12 times numerator 1 equals 12
Denominator 1 times denominator 2 equals 2

12/2 = Numerator 12 divided by denominator 2 equals 6

As you can see the same answer of 6 is obtained as when you divide 12 by 2 as when you multiply 12 by 1/2.

Dividing a fraction by a whole number

Rule: When a whole number is being divided by a fraction you must make the whole number a fraction by putting a 1 beneath the whole number as a denominator.

To divide you will divide numerator by numerator and denominator by denominator.
Example: 6/8 divided by 6

      Make the whole number 6 a fraction by placing a 1 beneath it as the denominator
      6/8 divided by 6/1
      Divide numerator 6 by the numerator 6 and this gives you a new numerator of 1
      Divide denominator 8 by denominator 1 and this gives you a denominator of 8
      Answer: 1/8

You can get the same answer by inverting the fraction made by the whole number
Invert 6/1 and change it to 1/6

Next multiply the initial fraction 6/8 by 1/6

Numerator 6 times numerator 1 equals 6
Denominator 8 times denominator 6 equals 48
Answer: 3/48 = reduced to lowest terms equals 6/48 reduced to its lowest terms equals 1/8

Dividing a fraction by a fraction

Rule: To divide a fraction by a fraction the fraction that is the dividend remains setup as is and the fraction that is to be the divisor gets inverted. After the problem is set up then multiply the numerator of the dividend fraction by the numerator of the divisor fraction to come up with the new numerator. Next multiply the denominator of the dividend fraction by the denominator of the divisor fraction to come up with the new denominator.

Example: 3/4 divided by 1/12 is the same as 3/4 times 12/1

    Numerator 3 times numerator 12 = 36
Denominator 4 times denominator 1 = 4

Answer: 36/4 – next divide 4 into 36 and the answer is 9

Dividing a mixed number by a whole number

Example:
Problem: 5 and 1/3 divided by 8

Step # 1 – Change 5 and 1/3 to an improper fraction. – Multiply the denominator 3 by the whole number 5, which comes to 15. Next add 15 to the numerator 1 and you get 16 as the numerator. The denominator 3 remains as the denominator. The improper fraction created is 16/3.

Step # 2 – Change the whole number 8 into a fraction by placing a 1 below the 8 making 8 the numerator of the created fraction and 1 the denominator of the created fraction.

Step # 3 – Numerator 16 divided by numerator 8 = 2
Step 4 – denominator 3 divided by denominator 1 = 3
Answer: 2/3
You can also work this problem by inverting the divisor fraction from 8/1 to 1/8
Set up the problem as 16/3 times 1/8
Numerator 16 times numerator 1 = 16
Denominator 3 times denominator 8 = 24
Answer: Reduced to lowest terms = 2/3

Dividing a mixed number by a proper fraction

Rule: Change the mixed number to an improper fraction and then set up the equation

Example: 6 and 2/3 divided by 2/3

Step 1 – Change the mixed number to an improper fraction by multiplying the denominator 3 by the whole number 6, which gives you 18. Then add 18 to the numerator 2, which gives you 20
Step 2 – The denominator 3 remains the same. Write the created improper fraction as 20/3
Step 3 – Now set up the problem – 20/3 divided by 2/3
Step 4 – Divide numerator 20 by numerator 2 which = 10
Step 5 – Divide denominator 3 by denominator 3, which gives you 1
Answer = 10/1 – Divide numerator 10 by denominator 1 and the answer is 10

Alternately you can invert the divisor 20/3 and multiply

Step 1 – Invert the divisor 2/3 to 3/2
Step 2 – Set up the problem as follows: 20/3 times 3/2
Step 3 – Multiply numerators 20 times 3 which equals 60
Step 4 – Multiply the denominators 3 times 2 which equals 6
Step 5 – Your answer comes to 60/6
Step 6 – Divide numerator 60 by denominator 6, which equals 10
Answer: 10

Dividing a proper fraction by a mixed number

Rule: Change the mixed number to an improper fraction and then set up the equation

Example: 3/8 divided by 1 and ¾

Step 1 – Change the mixed number to an improper fraction by multiplying the denominator 4 by the whole number 1, which gives you 4. Then add 4 to the numerator 3, which gives you 7
Step 2 – The denominator 4 remains the same. Write the created improper fraction as 7/4
Step 3 – Now set up the problem – 3/8 divided by 7/4
Step 4 – Invert the divisor 7/4 to 4/7
Step 4 – Next you must change the problem to a multiplication problem as 3/8 times 4/7
Step 4 – Multiply numerator 3 by numerator 4 which = 12
Step 5 – Multiply denominator 8 by denominator 7, which gives you 56
Step 6 – You now have 12/56, which must be reduced by finding the least common denominator of the numerator and the denominator.
12 – 1, 2, **4**, 6, and 12
56 – 1, 2, **4**
4 is the highest number that will go into both 12 and 56
Step 6 – Divide numerator 12 by 4 which = 3
Step 7 – Divide denominator 56 by 4 which = 14
Answer: 3/14

Dividing a mixed number by a mixed number

Rule: Change both mixed numbers to improper fractions, invert the divisor and then multiply numerator times numerator and denominator times denominator.

Example: 5 and 1/3 divided by 1 and 1/3

Step 1 – Take the dividend 5 and 1/3 and multiply denominator 3 by the whole number 5, which gives you 15. Next add 15 to numerator 1 which gives you 16. The denominator stays the same so you have the improper fraction 16/3

Step 2 – Take the dividend 1 and 1/3 and multiply denominator 3 by the whole number 1, which gives you 3. Next add 3 to numerator 1 which gives you 4. The denominator stays the same so you have the improper fraction 4/3

Step 3 – Set up the problem as follows: 16/3 divided by 4/3
Step 4 – Next you want to invert the divisor 4/3 to 3/4 and set up the problem as follows: 16/3 times 3/4
Step 5 – Multiply numerator 16 times numerator 3 which = 48
Step 6 – Multiply denominator 3 times denominator 4 which = 12
Answer: 48/12
Step 7 – Divide the numerator 48 by the denominator 12 and the answer is 4 or you can find the least common denominator of the numerator and the denominator, which in this case would be 12. 48 divided by 12 = 4 and 12 divided by 12 = 1 – 4/1 = 4
Answer: 4

Changing a fraction to a decimal

Rule: Divide the numerator by the denominator
Example: 1/8 – Divide the numerator of 1 by the denominator of 8 which = 0.125

Rule: If you have a mixed number change it to an improper fraction by multiplying the denominator by the whole number and then take that sum and add it to the numerator.

Example: 6 and 1/8 – Multiply denominator 8 by the whole number 6, which gives you 48. Next add 48 to numerator 1 and you get 49. The denominator 8 stays the same so you have now created the improper fraction 49/8.

To convert 49/8 to a decimal take the denominator 8 and divide it into numerator 49 which gives = 6.125

Addition of decimals

The procedure is the same as for the addition of whole numbers

Step 1 - Keep the decimal points aligned under each other in a column
Step 2 – Keep tenths under tenths, hundredths under hundredths, etc.
Step 3 – Keep whole number place values in proper columns
Step 4 – Make sure that every line of numbers to be added has the same number of decimal places as the line of numbers below it.
Step 5 – Keep the decimal point in its proper alignment in the final difference

Example: 6.225	5.250
+	+ .150
4.750	6.750
10.975	**12.150**

Subtraction of decimals

The procedure is the same as for the subtraction of whole numbers

Step 1 - Keep the decimal points aligned under each other in a column
Step 2 – Keep tenths under tenths, hundredths under hundredths, etc.
Step 3 – Keep whole number place values in proper columns
Step 4 – Make sure that every line of numbers to be added has the same number of decimal places as the line of numbers below it.
Step 5 – Keep the decimal point in its proper alignment in the final difference

Example: 6.225	6.750
-	- .150
4.750	5.750
1.475	**0.85**

Multiplication of decimals

Rule: Multiplying by 10 moves the decimal place in the answer 1 space to the right
Multiplying by 100 moves the decimal place in the answer 2 spaces to the right
Multiply by 1000 move the decimal place in the answer 3 spaces to the right
And so forth

Note:
The procedure is the same as in the multiplication of whole numbers however you have to place the decimal point in the answer.

Step 1 – Multiply the numbers

Step 2 – Starting at the far right side of the first number used in the multiplication problem, count the number of decimal places to the left

Step 3 – Starting at the far right side of the second number used in the multiplication problem, count the number of decimal places to the left

Step 4 – Total up the number of decimal places you counted between the two numbers

Step 5 – After the multiplication is complete, start at the far right side of the answer that was derived from the multiplication problem, and move the decimal to the left the total number of spaces that was counted from the two numbers that were multiplied.

Division of decimals

Rule: To divide a decimal by a whole number, divide as usual, but place the decimal point in the quotient directly above the dividend.

Division of a decimal by a decimal

Rule: move the decimal point of the divisor as many places to the right as necessary to make it a whole number. Then move the decimal point of the dividend the same number of places, adding zeroes if necessary.

Rounding decimals

Rule: Occasionally when dividing decimals there is a remainder. Zeroes may be added to the dividend and more decimal places found. However, some quotients will never come out even so you may end up having to round to the nearest tenth. To do this, carry out the division to two decimal places. If the digit in the hundredth's place is five or more, increase the number in the tenth place by one.

Example: 37.66 – Round to 37.7
45.333 – Round to 45.3

Practice/Sample Mathematics Problems

The math test will be set up identically to this section on sample problems. There will be total of 50 questions.

Part 1 – Change fractions to mixed numbers

1. 41/7 = **5 and 6/7**
2. 54/7 = **7 and 5/7**
3. 65/9 = **7 and 2/9**
4. 33/4 = **8 and 1/4**
5. 27/6 = **4 and 3/6 – Could be reduced to 4 and 1/2**

Part 2 – Change mixed numbers to fractions

1. 9 and 1/3 = **28/3**
2. 10 and 3/4 = **43/4**
3. 2 and 5/3 = **11/3**
4. 4 and 5/8 = **37/8**
5. 6 and 7/5 = **37/5**

Part 3 – Addition of fractions

1. 4/6 + 6/8 =
   4/6 = X/24 = 16/24
   6/8 = X/24 = 18/24
   16/24 + 18/24 = **34/24 – Reduced to 17/12 – reduced to 1 and 5/12**

2. 5/8 + 2/3 =
   5/8 = X/24 = 15/24
   2/3 = X/24 = 16/24
   15/24 + 16/24 = **31/24 – Reduced to 1 and 7/24**

3. 6/9 + 2/3 =
   6/9 = X/9 = 6/9
   2/3 = X/9 = 6/9
   6/9 + 6/9 = **12/9 – Reduced to 1 and 3/9 – Further reduced to 1 and 1/3**

4. 4/5 + 3/7 =
   4/5 = X/35 = 28/35
   3/7 = X/35 = 15/35
   28/35 + 15/35 = **43/35 – Reduced to 1 and 8/35**

5. 7/16 + 3/8 =
   7/16 = X/16 = 7/16
   3/8 = X/16 = 6/16
   7/16 + 6/16 = **13/16**

Part 4 – Subtraction of fractions

1. 8/6 – 3/5 =
    8/6 = X/30 = 40/30
    3/5 = X/30 = 18/30
    40/30 – 18/30 = **22/30 – Reduced to 11/15**

2. 9/5 –4/3 =
    9/5 = X/15 = 27/15
    4/3 = X/15 = 20/15
    27/15 – 20/15 = **7/15**

3. 4/9 – 3/7 =
    4/9 = X/63 = 28/63
    3/7 = X/63 = 27/63
    28/63 – 27/63 = **1/63**

4. 8/3 – 2/4 =
    8/3 = X/12 = 32/12
    2/4 = X/12 = 6/12
    32/12 - 6/12 = **26/12 – Reduced to 2 and 2/12 – Further reduced to 2 and 1/6**

5. 7/6 – 6/5 =
    7/6 = X/30 = 35/30
    5/5 = X/30 = 30/30
    35/30 – 30/30 = **5/30 – Reduced to 1/30**

Part 5 - Multiplication of fractions

1. 9/5 times 6/2 = **54/10 – Reduced to 5 and 4/10 – further reduced to 5 and 2/5**
2. 8/4 times 2/4 = **16/16 – Reduced to 1**
3. 6/8 times 21/6 = **126/48 – Reduced to 2 and 30/48 – Reduced to 2 and 5/8**
4. 7/2 times 5/3 = **35/6 – Reduced to 5 and 5/6**
5. 3/4 times 3/4 = **9/16**

Part 6 - Division of fractions

1. 4/6 divided by 2/4 =
   4/6 times 4/2 = **8/12 – Reduced to 2/3**

2. 5/8 divided by 7/16 =
   5/8 times 16/7 = **80/56 – Reduced to 1 and 24/56 – 1 and 6/14 -Further reduced to 1 and 3/7**

3. 2/16 divided by 3/8 =
   2/16 times 8/3 = **16/48 – Reduced to 1/3**

4. 9/14 divided by 7/8 =
   9/14 times 8/7 = **72/98 Reduced to 36/49**

5. 3/9 divided by 8/3 =
   3/9 times 3/8 = **9/72 – Reduced to 1/8**

Part 7 - Addition of decimals

1. 987.345 + 6.333 + 888.444 = **1882.122**
2. 34.56 + 56.98 + 7.89 = **99.43**
3. 5674.876 + 98.765 + 33.000 + 24.098 = **5830.739**
4. 109.234 + 5.444 + 298.222 = **412.9**
5. 765.987 + 45.098 + 222.998 = **1034.083**

Part 8 - Subtraction of decimals

1. 765.098 – 234.778 = **530.32**
2. 667.777 - 87.888 = **579.889**
3. 309.05 - 9.09 = **299.96**
4. 0.098 - 0.076 = **0.022**
5. 75648.098 - 564.096 = **75084.002**

Part 9 - Multiplication of decimals

1. 0.546 times 3.4 = **1.8564**
2. 98.56 times 3.2 = **315.392**
3. 9.35 times 0.05 = **0.4675**
4. 10.23 times 5.4 = **55.242**
5. 0.5 times 50 = **25**

Part 10 - Division of decimals

1. 25.25 divided by 12 = **2.10**
2. 3.44 divided by 2.5 = **1.376**
3. 4.5 divided by 1.2 = **3.75**
4. 7.34 divided by 2.31 = **3.18**
5. 298.90 divided by 50 = **5.978**