

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

Date: \_\_\_\_\_

**Math 8 Review 2a to 2.3: Adding, Subtracting, and Multiplying Fractions**

Note: When adding or subtracting fractions, you need to find the lowest common denominator. This is like finding the lowest common multiple. One way to find the LCD or LCM is to list out all the multiples of both numbers and then find the smallest one that is a multiple of both:

1. Find the lowest common multiple for each set of numbers:

a) 4 and 6	b) 3 and 9	c) 8 and 6
d) 10 and 12	e) 12 and 15	f) 18 and 12
g) 4, 5, and 6	h) 6, 8, and 10	i) 8, 9, and 12

2. Add or subtract the following

a) $\frac{5}{9} + \frac{40}{72}$	b) $\frac{3}{18} + \frac{25}{30}$	c) $\frac{10}{21} + \frac{22}{28}$
d) $1\frac{2}{5} + 3\frac{2}{20}$	e) $1\frac{5}{17} - \frac{38}{51}$	f) $\frac{34}{39} - \frac{55}{78}$
g) $2\frac{1}{5} + 3\frac{2}{4} - 2\frac{7}{3}$	h) $-3\frac{1}{4} + 3\frac{2}{3} + 1\frac{1}{2}$	i) $4\frac{7}{8} - 2\frac{9}{10} - 2\frac{13}{20}$

Note: When simplifying, reducing, or multiplying fractions, reduce them using the greatest common factor. A factor is a value that a number can be divided evenly into. The GCF is the largest factor that both numbers can be divided into. One way to do this is to list out all the factors both for numbers:

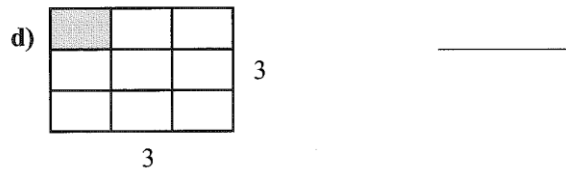
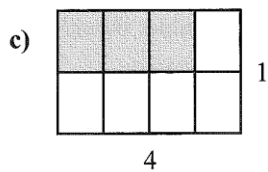
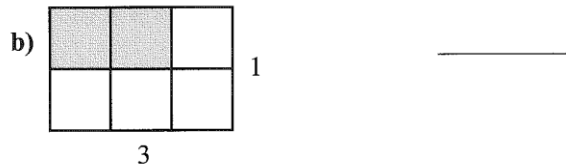
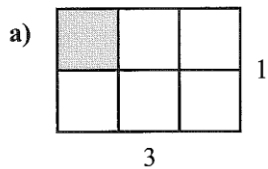
3. Find the greatest common factor for each set of numbers:

a) 18 and 12	b) 45 and 25	c) 36 and 60
d) 45 and 60	e) 34 and 51	f) 25 and 75
g) 45, 60, and 90	h) 24, 36, and 18	i) 40, 80, and 140

4. Simplify each fraction into lowest terms:

a) $\frac{20}{25}$	b) $\frac{72}{54}$	c) $\frac{49}{21}$	d) $\frac{90}{27}$	e) $\frac{24}{80}$
f) $\frac{77}{55}$	g) $\frac{120}{30}$	h) $\frac{72}{99}$	i) $\frac{55}{45}$	j) $\frac{216}{108}$

2. Determine the area of the shaded portion of the rectangle.



5. Find the equivalent mixed fraction.

g)  $\frac{100}{9}$  \_\_\_\_\_ h)  $\frac{137}{10}$  \_\_\_\_\_

i)  $\frac{41}{11}$  \_\_\_\_\_ j)  $\frac{91}{12}$  \_\_\_\_\_

k)  $\frac{31}{13}$  \_\_\_\_\_ l)  $\frac{43}{14}$  \_\_\_\_\_

m)  $\frac{71}{15}$  \_\_\_\_\_ n)  $\frac{35}{16}$  \_\_\_\_\_

o)  $\frac{49}{17}$  \_\_\_\_\_ p)  $\frac{65}{17}$  \_\_\_\_\_

6. Multiply. Leave answer in mixed fractional form.

a)  $5 \cdot 3\frac{2}{5}$  \_\_\_\_\_ b)  $8 \times 5\frac{1}{4}$  \_\_\_\_\_

c)  $9 \cdot 3\frac{2}{3}$  \_\_\_\_\_ d)  $\frac{2}{3} \times 2\frac{2}{5}$  \_\_\_\_\_

e)  $\frac{2}{7} \cdot 8\frac{3}{4}$  \_\_\_\_\_ f)  $\frac{4}{5} \times 8\frac{1}{3}$  \_\_\_\_\_

g)  $6\frac{2}{3} \cdot 1\frac{4}{5}$  \_\_\_\_\_ h)  $4\frac{1}{8} \times 9\frac{1}{3}$  \_\_\_\_\_

5. A recipe calls for  $\frac{4}{5}$  of a cup of sugar. How much sugar would be required to make  $\frac{3}{4}$  of the recipe?

6. If it takes  $\frac{3}{4}$  of a litre of paint to paint a chair, how much paint is required to paint 12 chairs of the same size?

7. A house worth \$328 000 is assessed for  $\frac{7}{8}$  of its value. What is the assessed value of the house?

8. Of the students in a high school,  $\frac{4}{5}$  have cell phones, and  $\frac{1}{4}$  of the students with cell phones play on a school team. What fraction of students in the high school play on a school team?

i)  $3\frac{5}{7} \cdot 2\frac{3}{5}$  \_\_\_\_\_ j)  $4\frac{5}{19} \times 40\frac{1}{9}$  \_\_\_\_\_

k)  $4\frac{8}{23} \cdot 5\frac{3}{50}$  \_\_\_\_\_ l)  $5\frac{7}{11} \times 3\frac{28}{31}$  \_\_\_\_\_

m)  $22\frac{3}{13} \cdot 9\frac{16}{17}$  \_\_\_\_\_ n)  $6\frac{4}{13} \times 12\frac{1}{14}$  \_\_\_\_\_

o)  $5\frac{17}{35} \cdot 1\frac{11}{24}$  \_\_\_\_\_ p)  $7\frac{1}{5} \times 3\frac{1}{8} \times 4$  \_\_\_\_\_

4. Multiply and simplify if possible.

a)  $\frac{1}{4} \cdot \frac{5}{7} \cdot \frac{3}{8}$

b)  $\frac{4}{9} \times \frac{5}{8} \times \frac{3}{15}$

c)  $\frac{5}{36} \cdot \frac{28}{3} \cdot \frac{6}{5}$

d)  $\frac{5}{6} \times \frac{54}{11} \times \frac{3}{25}$

e)  $\frac{18}{121} \cdot \frac{11}{36} \cdot \frac{12}{33}$

f)  $\frac{3}{32} \times \frac{21}{56} \times \frac{64}{15}$

g)  $\frac{6}{14} \cdot \frac{7}{45} \cdot \frac{15}{21} \cdot \frac{147}{7}$

h)  $\frac{7387}{8633} \times \frac{485}{581}$

9. The sales tax on a car in BC is  $\frac{3}{25}$  of the price of the car. What is the total amount a person would pay for a \$28 350 car?

10. A sheet of paper is  $\frac{27}{4}$  inches wide, by  $\frac{26}{3}$  inches long. What is the area of the piece of paper?