One awesome thing you can do over the summer is make flash cards with your multiplication facts. You can drill them "flashcard style" or you can play the game memory with them if you put the answers and multiplication problems on separate cards. Work your way up from the 2's facts thru the 9's facts. You can add the 11's and 12's if you are ready for the challenge.
Secondly, you can practice the basic operations for decimals and fractions. Here are a few videos you can watch to refresh:
The last video is about Prime numbers and Prime factorisation. You can use Factor Trees or Factor Ladders to Prime factor each number.

Decimals:
https://www.youtube.com/watch?v=kwh4SD1ToFc

Fractions:
simplify: https://www.youtube.com/watch?v=AtBUQH8Tkqc

add/ subtract: https://www.youtube.com/watch?v=5juto2ze8Lg

Multiply: https://www.youtube.com/watch?v=qmfXyR7Z6Lk

divide: https://mathantics.com/lesson/dividing-fractions

Factor: https://www.youtube.com/watch?v=XGbOiYhHY2c

Practice worksheets-- remember to simplify all fractions. Also, remember to cross cancel with multiplying of dividing in order to get simplified answers.
https://docs.google.com/document/d/1g4cpnGEZ1x-T42_rcCnpsNujmKd6Z1x8OTxAA7MW3VY/edit?usp=sharing

Summer practice:

Decimal Addition

DA 1

Instructions: Add these decimals using the procedure you learned in the video. Don't forget to line up the decimal points when adding.

1 5.8 + 12.4

$$\begin{array}{r} {\scriptstyle 1} \\ 5.8 \\ +\ 12.4 \\ \hline 18.2 \end{array}$$

2 3.2 + 0.5

3 10.9 + 0.12

4 245 + 8.9

5 17.2 + 25.6

6 83.6 + 2.125

7 0.412 + 0.65

8 33.75 + 9.8

9 0.123 + 45.6

Decimal Subtraction

DA 2

Instructions: Subtract these decimals using the procedure you learned in the video. Don't forget to line up the decimal points when subtracting and remember that order matters in subtraction.

1 9.23 – 4.5

$$\begin{array}{r} {\scriptstyle 8\ \ 1\ \ \ \ } \\ 9.\not{2}3 \\ -\ 4.50 \\ \hline 4.73 \end{array}$$

2 8.0 – 0.6

3 12 – 1.3

4 8.9 – 5.7

5 50.7 – 42.1

6 81.3 – 6.75

7 129.8 – 85.4

8 0.745 – 0.561

9 4.925 – 3.8

Decimal Multiplication

Instructions: Multiply these decimals using the procedure you learned in the video. (Remember to pretend that you are working with whole numbers and then shift the decimal in your answer.)

1 3.2×5.26

$$\begin{array}{r} {\scriptstyle 1\ \ \ \ \ } \\ {\scriptstyle 1\ \ \ \ \ } \\ 5.26 \\ \times\ \ 3.2 \\ \hline {\scriptstyle 1\ } \\ 1052 \\ +\ 15780 \\ \hline 16.832 \end{array}$$

2 4.5×2.4

3 0.25×0.11

4 62×1.8

5 316×2.8

6 0.125×65

7 9.23×3.1

8 0.34×0.216

9 70.4×3.4

Decimal Division

DA 4

Instructions: Divide these decimals using the procedure you learned in the video. Remember, you can shift the decimals in <u>both</u> the divisor and the dividend to make an equivalent division problem that does not have a decimal divisor.

1 $2.3\overline{)7.245}$

```
    3.15
2.3)7.245
  -69
   34
  -23
   115
  -115
     0
```

2 $1.1\overline{)25.85}$

3 $8\overline{)69.6}$

4 $0.12\overline{)5.676}$

5 $2.5\overline{)3675}$

6 $1.4\overline{)284.2}$

Reminders: DON't forget to move the decimals like the example!

For number 5– THINK quarters!!!! For number 6– use estimation or break it into two problems (go through by 2 and then 7)

Simplifying Fractions

SIM 1

Instructions: Simplify these fractions using the procedure you learned in the video. Cancel common factors and remultiply any remaining factors to get your final answer.

1. $\frac{12}{14} = \frac{2 \times 2 \times 3}{2 \times 7} = \frac{6}{7}$
2. $\frac{5}{10} = \_\_\_\_\_ =$
3. $\frac{6}{9} = \_\_\_\_\_ =$
4. $\frac{9}{12} = \_\_\_\_\_ =$
5. $\frac{7}{21} = \_\_\_\_\_ =$
6. $\frac{14}{16} = \_\_\_\_\_ =$
7. $\frac{7}{14} = \_\_\_\_\_ =$
8. $\frac{15}{40} = \_\_\_\_\_ =$
9. $\frac{5}{20} = \_\_\_\_\_ =$
10. $\frac{22}{44} = \_\_\_\_\_ =$
11. $\frac{8}{12} = \_\_\_\_\_ =$
12. $\frac{20}{24} = \_\_\_\_\_ =$
13. $\frac{10}{15} = \_\_\_\_\_ =$
14. $\frac{25}{30} = \_\_\_\_\_ =$
15. $\frac{18}{24} = \_\_\_\_\_ =$
16. $\frac{16}{36} = \_\_\_\_\_ =$
17. $\frac{10}{25} = \_\_\_\_\_ =$
18. $\frac{35}{50} = \_\_\_\_\_ =$

Simplifying Fractions - Set 2

SIM 2

Instructions: Simplify these fractions using the procedure you learned in the video. Cancel any common factors and remultiply remaining factors to get your final answer.

1. $\frac{15}{20} = \frac{3 \times 5}{2 \times 2 \times 5} = \frac{3}{4}$
2. $\frac{16}{30} = \_\_\_\_ =$
3. $\frac{12}{18} = \_\_\_\_ =$
4. $\frac{15}{45} = \_\_\_\_ =$
5. $\frac{20}{25} = \_\_\_\_ =$
6. $\frac{27}{39} = \_\_\_\_ =$
7. $\frac{14}{21} = \_\_\_\_ =$
8. $\frac{48}{72} = \_\_\_\_ =$
9. $\frac{20}{32} = \_\_\_\_ =$
10. $\frac{32}{40} = \_\_\_\_ =$
11. $\frac{18}{36} = \_\_\_\_ =$
12. $\frac{45}{125} = \_\_\_\_ =$
13. $\frac{42}{63} = \_\_\_\_ =$
14. $\frac{63}{105} = \_\_\_\_ =$
15. $\frac{60}{75} = \_\_\_\_ =$
16. $\frac{42}{140} = \_\_\_\_ =$
17. $\frac{36}{84} = \_\_\_\_ =$
18. $\frac{33}{121} = \_\_\_\_ =$

Don’t forget to simplify fractions! That is GREAT practice!

1. $\frac{8}{10} - \frac{7}{10} = \frac{1}{10}$
2. $\frac{3}{25} + \frac{30}{25} =$
3. $\frac{20}{32} + \frac{7}{32} =$
4. $\frac{17}{30} + \frac{5}{30} =$
5. $\frac{3}{15} + \frac{3}{15} =$
6. $\frac{12}{16} - \frac{11}{16} =$
7. $\frac{50}{44} - \frac{48}{44} =$
8. $\frac{27}{79} - \frac{23}{79} =$
9. $\frac{15}{18} + \frac{4}{18} =$
10. $\frac{11}{22} + \frac{10}{22} =$
11. $\frac{28}{50} - \frac{16}{50} =$
12. $\frac{8}{46} - \frac{3}{46} =$
13. $\frac{9}{11} - \frac{6}{11} =$
14. $\frac{96}{136} + \frac{6}{136} =$
15. $\frac{21}{24} + \frac{20}{24} =$
16. $\frac{35}{98} + \frac{35}{98} =$
17. $\frac{68}{80} - \frac{50}{80} =$
18. $\frac{20}{31} + \frac{13}{31} =$
19. $\frac{15}{38} + \frac{5}{38} =$
20. $\frac{19}{19} - \frac{8}{19} =$

1 $\frac{3}{10} + \frac{6}{10} - \frac{5}{10} = \frac{4}{10}$

$\frac{9}{10} - \frac{5}{10} =$

2 $\frac{9}{8} - \left(\frac{5}{8} + \frac{1}{8}\right) =$

3 $\frac{6}{15} + \frac{7}{15} - \frac{4}{15} =$

4 $\frac{50}{61} - \left(\frac{25}{61} - \frac{20}{61}\right) =$

5 $\frac{8}{26} + \frac{2}{26} + \frac{7}{26} =$

6 $\frac{16}{40} - \left(\frac{5}{40} + \frac{7}{40}\right) =$

7 $\frac{15}{20} + \left(\frac{35}{20} - \frac{32}{20}\right) =$

8 $\frac{11}{77} + \frac{12}{77} + \frac{13}{77} =$

9 $\frac{25}{54} - \frac{10}{54} - \frac{7}{54} =$

10 $\frac{45}{82} - \left(\frac{30}{82} + \frac{15}{82}\right) =$

11 $\frac{14}{38} + \left(\frac{15}{38} - \frac{7}{38}\right) =$

12 $\frac{26}{59} - \frac{6}{59} - \frac{10}{59} =$

Un-Guided Practice with the LCD Method

Instructions: Add or subtract these 'un-like' fractions using the LCD method you learned in the video. Show your work and you do **not** need to simplify your answers.

1 $\frac{2}{3} + \frac{1}{6}$

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

$\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$

2 $\frac{7}{12} - \frac{1}{6}$

3 $\frac{15}{24} + \frac{5}{8}$

4 $\frac{9}{10} - \frac{1}{5}$

5 $\frac{3}{8} + \frac{3}{2}$

6 $\frac{3}{7} + \frac{5}{14}$

7 $\frac{5}{3} - \frac{3}{4}$

8 $\frac{4}{6} - \frac{3}{8}$

Un-Guided Practice with the LCD Method - Set 2

Instructions: Add or subtract these 'un-like' fractions using the LCD method you learned in the video. Show your work and you do **not** need to simplify your answers.

1 $\frac{1}{2} + \frac{3}{14}$

$\frac{7}{7} \times \frac{1}{2} + \frac{3}{14}$

$\frac{7}{14} + \frac{3}{14} = \frac{10}{14}$

2 $\frac{16}{30} + \frac{1}{10}$

3 $\frac{7}{16} - \frac{1}{4}$

4 $\frac{8}{11} - \frac{5}{22}$

5 $\frac{4}{5} + \frac{2}{3}$

6 $\frac{5}{6} - \frac{4}{30}$

7 $\frac{5}{9} - \frac{10}{27}$

8 $\frac{7}{9} - \frac{5}{12}$

CROSS CANCEL FIRST – then you answers will be simplified!!!

Multiplying Fractions - Set 2

MUL 2

Instructions: Use the procedure you learned in the video to multiply these fractions. The 'dot' multiplication symbol is used in some problems. You do **not** need to simplify your answers.

1. $\frac{4}{6} \times \frac{4}{5} = \frac{16}{30}$
2. $\frac{3}{4} \times \frac{4}{6} =$
3. $\frac{5}{6} \times \frac{2}{6} =$
4. $\frac{4}{7} \times \frac{1}{8} =$
5. $\frac{4}{7} \times \frac{5}{3} =$
6. $\frac{6}{10} \cdot \frac{9}{7} =$
7. $\frac{7}{6} \times \frac{5}{8} =$
8. $\frac{5}{3} \times \frac{3}{5} =$
9. $\frac{3}{10} \times \frac{3}{4} =$
10. $\frac{9}{5} \times \frac{1}{10} =$
11. $\frac{1}{8} \cdot \frac{10}{5} =$
12. $\frac{5}{8} \cdot \frac{5}{4} =$
13. $\frac{2}{8} \times \frac{8}{2} =$
14. $\frac{3}{7} \cdot \frac{4}{7} =$
15. $\frac{10}{11} \cdot \frac{3}{4} =$
16. $\frac{10}{15} \times \frac{1}{2} =$
17. $\frac{2}{3} \cdot \frac{9}{12} =$
18. $\frac{1}{10} \cdot \frac{1}{10} =$

Multiplying Fractions

MUL 1

Instructions: Use the procedure you learned in the video to multiply these fractions together. You do **not** need to simplify your answers.

1. $\frac{2}{5} \times \frac{3}{4} = \frac{6}{20}$
2. $\frac{1}{2} \times \frac{7}{8} =$
3. $\frac{2}{3} \times \frac{2}{3} =$
4. $\frac{3}{5} \times \frac{4}{6} =$
5. $\frac{1}{4} \times \frac{5}{2} =$
6. $\frac{3}{3} \times \frac{8}{7} =$
7. $\frac{6}{8} \times \frac{2}{5} =$
8. $\frac{1}{2} \times \frac{12}{6} =$
9. $\frac{5}{6} \times \frac{5}{8} =$
10. $\frac{7}{4} \times \frac{6}{4} =$
11. $\frac{4}{7} \times \frac{2}{5} =$
12. $\frac{4}{8} \times \frac{9}{8} =$
13. $\frac{1}{7} \times \frac{1}{4} =$
14. $\frac{4}{10} \times \frac{5}{5} =$
15. $\frac{4}{3} \times \frac{7}{8} =$
16. $\frac{9}{9} \times \frac{2}{9} =$
17. $\frac{0}{4} \times \frac{3}{8} =$
18. $\frac{7}{5} \times \frac{7}{12} =$

Dividing a Fraction by a Whole Number (and Vice-Versa)

DIV 4

Instructions: Solve these division problems. You do **not** need to simplify your answers in this exercise set.

1. $\frac{3}{5} \div 2 = \frac{3}{5} \div \frac{2}{1}$

   $\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$

2. $5 \div \frac{3}{8} =$

3. $\frac{1}{4} \div 3 =$

4. $10 \div \frac{9}{2} =$

5. $\frac{6}{7} \div 5 =$

6. $\frac{1}{4} \div 4 =$

7. $9 \div \frac{4}{7} =$

8. $8 \div \frac{3}{4} =$

9. $\frac{5}{12} \div 2 =$

10. $4 \div \frac{1}{10} =$

Keep change Flip!!!!!

Keep Change Flip!!!!

Dividing Fractions (Guided Practice)

DIV 2

Instructions: Solve these division problems by multiplying by the reciprocal. Use the guides to help you. You do **not** need to simplify your answers.

1 $\frac{3}{4} \div \frac{2}{5}$

$\frac{3}{4} \times \frac{5}{2} = \frac{15}{8}$

2 $\frac{5}{4} \div \frac{2}{3}$

$\frac{5}{4} \times \frac{\quad}{\quad} =$

3 $\frac{1}{7} \div \frac{1}{4}$

$\frac{1}{7} \times \frac{\quad}{\quad} =$

4 $\frac{8}{13} \div \frac{1}{2}$

$\frac{8}{13} \times \frac{\quad}{\quad} =$

5 $\frac{3}{5} \div \frac{1}{6}$

$\frac{3}{5} \times \frac{\quad}{\quad} =$

6 $\frac{4}{8} \div \frac{5}{1}$

$\frac{4}{8} \times \frac{\quad}{\quad} =$

7 $\frac{5}{8} \div \frac{3}{4}$

$\frac{5}{8} \times \frac{\quad}{\quad} =$

8 $\frac{1}{12} \div \frac{1}{12}$

$\frac{1}{12} \times \frac{\quad}{\quad} =$

9 $\frac{7}{9} \div \frac{2}{3}$

$\frac{7}{9} \times \frac{\quad}{\quad} =$

10 $\frac{1}{8} \div \frac{3}{16}$

$\frac{1}{8} \times \frac{\quad}{\quad} =$

11 $\frac{5}{11} \div \frac{4}{7}$

$\frac{5}{11} \times \frac{\quad}{\quad} =$

12 $\frac{9}{10} \div \frac{5}{6}$

$\frac{9}{10} \times \frac{\quad}{\quad} =$

Prime Numbers

Instructions: Determine if the number given is a Prime Number. You can do this by testing for divisibility. (For the exercises on this page, you only need to try divisibility tests for 2,3,and 5.) Mark the correct box.

1	2	☒ Prime ☐ NOT Prime	2	4	☐ Prime ☐ NOT Prime
3	3	☐ Prime ☐ NOT Prime	4	11	☐ Prime ☐ NOT Prime
5	15	☐ Prime ☐ NOT Prime	6	17	☐ Prime ☐ NOT Prime
7	10	☐ Prime ☐ NOT Prime	8	8	☐ Prime ☐ NOT Prime
9	7	☐ Prime ☐ NOT Prime	10	9	☐ Prime ☐ NOT Prime
11	6	☐ Prime ☐ NOT Prime	12	12	☐ Prime ☐ NOT Prime
13	31	☐ Prime ☐ NOT Prime	14	44	☐ Prime ☐ NOT Prime
15	14	☐ Prime ☐ NOT Prime	16	25	☐ Prime ☐ NOT Prime
17	20	☐ Prime ☐ NOT Prime	18	19	☐ Prime ☐ NOT Prime

More Prime Factorization Practice

Instructions: Factor each number down to its Prime Factorization. For each problem, make a 'factor tree' on some scratch paper to help you get the right answer.

1. $40 =$ 2 x 2 x 2 x 5
   Prime Factorization
2. $50 =$ _____
   Prime Factorization
3. $32 =$ _____
   Prime Factorization
4. $72 =$ _____
   Prime Factorization
5. $100 =$ _____
   Prime Factorization
6. $150 =$ _____
   Prime Factorization
7. $175 =$ _____
   Prime Factorization
8. $66 =$ _____
   Prime Factorization
9. $270 =$ _____
   Prime Factorization
10. $102 =$ _____
    Prime Factorization
11. $160 =$ _____
    Prime Factorization

Answer keys:

Decimal Addition

DA

Instructions: Add these decimals using the procedure you learned in the video. Don't forget to line up the decimal points when adding.

1 5.8 + 12.4

$$\begin{array}{r} {\scriptstyle 1} \\ 5.8 \\ +\ 12.4 \\ \hline 18.2 \end{array}$$

2 3.2 + 0.5

$$\begin{array}{r} 3.2 \\ +\ 0.5 \\ \hline 3.7 \end{array}$$

3 10.9 + 0.12

$$\begin{array}{r} {\scriptstyle 1} \\ 10.90 \\ +\ 0.12 \\ \hline 11.02 \end{array}$$

4 245 + 8.9

$$\begin{array}{r} {\scriptstyle 1} \\ 245.0 \\ +\ 8.9 \\ \hline 253.9 \end{array}$$

5 17.2 + 25.6

$$\begin{array}{r} {\scriptstyle 1} \\ 17.2 \\ +\ 25.6 \\ \hline 42.8 \end{array}$$

6 83.6 + 2.125

$$\begin{array}{r} 83.600 \\ +\ 2.125 \\ \hline 85.725 \end{array}$$

7 0.412 + 0.65

$$\begin{array}{r} {\scriptstyle 1} \\ 0.412 \\ +\ 0.650 \\ \hline 1.062 \end{array}$$

8 33.75 + 9.8

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 33.75 \\ +\ 9.80 \\ \hline 43.55 \end{array}$$

9 0.123 + 45.6

$$\begin{array}{r} 0.123 \\ +\ 45.600 \\ \hline 45.723 \end{array}$$

worksheets

Decimal Subtraction

DA

Instructions: Subtract these decimals using the procedure you learned in the video. Don't forget to line up the decimal points when subtracting and remember that order matters in subtraction.

1 9.23 – 4.5

$$\begin{array}{r} {\scriptstyle 8\ 1} \\ 9.\cancel{2}3 \\ -\ 4.50 \\ \hline 4.73 \end{array}$$

2 8.0 – 0.6

$$\begin{array}{r} {\scriptstyle 7} \\ 8.\cancel{0} \\ -\ 0.6 \\ \hline 7.4 \end{array}$$

3 12 – 1.3

$$\begin{array}{r} {\scriptstyle 1} \\ 1\cancel{2}.0 \\ -\ 1.3 \\ \hline 10.7 \end{array}$$

4 8.9 – 5.7

$$\begin{array}{r} 8.9 \\ -\ 5.7 \\ \hline 3.2 \end{array}$$

5 50.7 – 42.1

$$\begin{array}{r} {\scriptstyle 4} \\ 5\cancel{0}.7 \\ -\ 42.1 \\ \hline 8.6 \end{array}$$

6 81.3 – 6.75

$$\begin{array}{r} {\scriptstyle 7\,^{1}0\,^{1}2} \\ 8\cancel{1}.\cancel{3}0 \\ -\ 6.75 \\ \hline 74.55 \end{array}$$

7 129.8 – 85.4

$$\begin{array}{r} 129.8 \\ -\ 85.4 \\ \hline 44.4 \end{array}$$

8 0.745 – 0.561

$$\begin{array}{r} {\scriptstyle 6} \\ 0.\cancel{7}45 \\ -\ 0.561 \\ \hline 0.184 \end{array}$$

9 4.925 – 3.8

$$\begin{array}{r} 4.925 \\ -\ 3.800 \\ \hline 1.125 \end{array}$$

1 3.2 × 5.26

$$\begin{array}{r} 5.26 \\ \times\ 3.2 \\ \hline 1052 \\ +\ 15780 \\ \hline 16.832 \end{array}$$

2 4.5 × 2.4

$$\begin{array}{r} 4.5 \\ \times\ 2.4 \\ \hline 180 \\ +\ 900 \\ \hline 10.80 \end{array}$$

3 0.25 × 0.11

$$\begin{array}{r} 0.25 \\ \times\ 0.11 \\ \hline 25 \\ +\ 250 \\ \hline 0.0275 \end{array}$$

4 62 × 1.8

$$\begin{array}{r} 62 \\ \times\ 1.8 \\ \hline 496 \\ +\ 620 \\ \hline 111.6 \end{array}$$

5 316 × 2.8

$$\begin{array}{r} 316 \\ \times\ 2.8 \\ \hline 2528 \\ +\ 6320 \\ \hline 884.8 \end{array}$$

6 0.125 × 65

$$\begin{array}{r} 0.125 \\ \times\ 65 \\ \hline 625 \\ +\ 7500 \\ \hline 8.125 \end{array}$$

7 9.23 × 3.1

$$\begin{array}{r} 9.23 \\ \times\ 3.1 \\ \hline 923 \\ +\ 27690 \\ \hline 28.613 \end{array}$$

8 0.34 × 0.216

$$\begin{array}{r} 0.216 \\ \times\ 0.34 \\ \hline 864 \\ +\ 6480 \\ \hline 0.07344 \end{array}$$

9 70.4 × 3.4

$$\begin{array}{r} 70.4 \\ \times\ 3.4 \\ \hline 2816 \\ +\ 21120 \\ \hline 239.36 \end{array}$$

1 $2.3\overline{)7.245}$

$$\begin{array}{r} 3.15 \\ -69 \\ \hline 34 \\ -23 \\ \hline 115 \\ -115 \\ \hline 0 \end{array}$$

2 $1.1\overline{)25.85}$

$$\begin{array}{r} 23.5 \\ -22 \\ \hline 38 \\ -33 \\ \hline 55 \\ -55 \\ \hline 0 \end{array}$$

3 $8\overline{)69.6}$

$$\begin{array}{r} 8.7 \\ -64 \\ \hline 56 \\ -56 \\ \hline 0 \end{array}$$

4 $0.12\overline{)5.676}$

$$\begin{array}{r} 47.3 \\ -48 \\ \hline 87 \\ -84 \\ \hline 36 \\ -36 \\ \hline 0 \end{array}$$

5 $2.5\overline{)3675.0}$

$$\begin{array}{r} 1470. \\ -25 \\ \hline 117 \\ -100 \\ \hline 175 \\ -175 \\ \hline 0 \end{array}$$

6 $1.4\overline{)284.2}$

$$\begin{array}{r} 203. \\ -28 \\ \hline 042 \\ -\ 42 \\ \hline 0 \end{array}$$

Instructions: Simplify these fractions using the procedure you learned in the video.
Cancel common factors and remultiply any remaining factors to get your final answer.

1. $\frac{12}{14} = \frac{2\times2\times3}{2\times7} = \frac{6}{7}$
2. $\frac{5}{10} = \frac{5\times1}{5\times2} = \frac{1}{2}$
3. $\frac{6}{9} = \frac{3\times2}{3\times3} = \frac{2}{3}$
4. $\frac{9}{12} = \frac{3\times3}{2\times2\times3} = \frac{3}{4}$
5. $\frac{7}{21} = \frac{1\times7}{3\times7} = \frac{1}{3}$
6. $\frac{14}{16} = \frac{2\times7}{2\times2\times2\times2} = \frac{7}{8}$
7. $\frac{7}{14} = \frac{1\times7}{2\times7} = \frac{1}{2}$
8. $\frac{15}{40} = \frac{3\times5}{2\times2\times2\times5} = \frac{3}{8}$
9. $\frac{5}{20} = \frac{1\times5}{2\times2\times5} = \frac{1}{4}$
10. $\frac{22}{44} = \frac{2\times11}{2\times2\times11} = \frac{1}{2}$
11. $\frac{8}{12} = \frac{2\times2\times2}{2\times2\times3} = \frac{2}{3}$
12. $\frac{20}{24} = \frac{2\times2\times5}{2\times2\times2\times3} = \frac{5}{6}$
13. $\frac{10}{15} = \frac{2\times5}{3\times5} = \frac{2}{3}$
14. $\frac{25}{30} = \frac{5\times5}{5\times2\times3} = \frac{5}{6}$
15. $\frac{18}{24} = \frac{2\times3\times3}{2\times2\times2\times3} = \frac{3}{4}$
16. $\frac{16}{36} = \frac{2\times2\times2\times2}{2\times3\times2\times3} = \frac{4}{9}$
17. $\frac{10}{25} = \frac{2\times5}{5\times5} = \frac{2}{5}$
18. $\frac{35}{50} = \frac{5\times7}{2\times5\times5} = \frac{7}{10}$

1. $\frac{15}{20} = \frac{3\times5}{2\times2\times5} = \frac{3}{4}$
2. $\frac{16}{30} = \frac{2\times2\times2\times2}{2\times3\times5} = \frac{8}{15}$
3. $\frac{12}{18} = \frac{2\times2\times3}{2\times3\times3} = \frac{2}{3}$
4. $\frac{15}{45} = \frac{3\times5}{3\times3\times5} = \frac{1}{3}$
5. $\frac{20}{25} = \frac{2\times2\times5}{5\times5} = \frac{4}{5}$
6. $\frac{27}{39} = \frac{3\times3\times3}{3\times13} = \frac{9}{13}$
7. $\frac{14}{21} = \frac{2\times7}{3\times7} = \frac{2}{3}$
8. $\frac{48}{72} = \frac{2\times2\times2\times2\times3}{2\times2\times2\times3\times3} = \frac{2}{3}$
9. $\frac{20}{32} = \frac{2\times2\times5}{2\times2\times2\times2\times2} = \frac{5}{8}$
10. $\frac{32}{40} = \frac{2\times2\times2\times2\times2}{2\times2\times2\times5} = \frac{4}{5}$
11. $\frac{18}{36} = \frac{2\times3\times3}{2\times3\times2\times3} = \frac{1}{2}$
12. $\frac{45}{125} = \frac{3\times3\times5}{5\times5\times5} = \frac{9}{25}$
13. $\frac{42}{63} = \frac{2\times3\times7}{3\times3\times7} = \frac{2}{3}$
14. $\frac{63}{105} = \frac{3\times3\times7}{5\times3\times7} = \frac{3}{5}$
15. $\frac{60}{75} = \frac{2\times3\times2\times5}{3\times5\times5} = \frac{4}{5}$
16. $\frac{42}{140} = \frac{2\times3\times7}{2\times2\times5\times7} = \frac{3}{10}$
17. $\frac{36}{84} = \frac{2\times2\times3\times3}{2\times2\times3\times7} = \frac{3}{7}$
18. $\frac{33}{121} = \frac{3\times11}{11\times11} = \frac{3}{11}$

1. $\frac{8}{10} - \frac{7}{10} = \frac{1}{10}$

2. $\frac{3}{25} + \frac{30}{25} = \frac{33}{25}$

3. $\frac{20}{32} + \frac{7}{32} = \frac{27}{32}$

4. $\frac{17}{30} + \frac{5}{30} = \frac{22}{30}$

5. $\frac{3}{15} + \frac{3}{15} = \frac{6}{15}$

6. $\frac{12}{16} - \frac{11}{16} = \frac{1}{16}$

7. $\frac{50}{44} - \frac{48}{44} = \frac{2}{44}$

8. $\frac{27}{79} - \frac{23}{79} = \frac{4}{79}$

9. $\frac{15}{18} + \frac{4}{18} = \frac{19}{18}$

10. $\frac{11}{22} + \frac{10}{22} = \frac{21}{22}$

11. $\frac{28}{50} - \frac{16}{50} = \frac{12}{50}$

12. $\frac{8}{46} - \frac{3}{46} = \frac{5}{46}$

13. $\frac{9}{11} - \frac{6}{11} = \frac{3}{11}$

14. $\frac{96}{136} + \frac{6}{136} = \frac{102}{136}$

15. $\frac{21}{24} + \frac{20}{24} = \frac{41}{24}$

16. $\frac{35}{98} + \frac{35}{98} = \frac{70}{98}$

17. $\frac{68}{80} - \frac{50}{80} = \frac{18}{80}$

18. $\frac{20}{31} + \frac{13}{31} = \frac{33}{31}$

19. $\frac{15}{38} + \frac{5}{38} = \frac{20}{38}$

20. $\frac{19}{19} - \frac{8}{19} = \frac{11}{19}$

Instructions: Solve these multi-step problems involving the addition and subtraction of 'like' fractions. Remember the *Order of Operations* rules. You do **not** need to simplify your answers.

1. $\frac{3}{10} + \frac{6}{10} - \frac{5}{10} = \frac{4}{10}$
   $\frac{9}{10} - \frac{5}{10} =$

2. $\frac{9}{8} - \left(\frac{5}{8} + \frac{1}{8}\right) = \frac{3}{8}$
   $\frac{9}{8} - \frac{6}{8} =$

3. $\frac{6}{15} + \frac{7}{15} - \frac{4}{15} = \frac{9}{15}$
   $\frac{13}{15} - \frac{4}{15} =$

4. $\frac{50}{61} - \left(\frac{25}{61} - \frac{20}{61}\right) = \frac{45}{61}$
   $\frac{50}{61} - \frac{5}{61} =$

5. $\frac{8}{26} + \frac{2}{26} + \frac{7}{26} = \frac{17}{26}$
   $\frac{10}{26} + \frac{7}{26} =$

6. $\frac{16}{40} - \left(\frac{5}{40} + \frac{7}{40}\right) = \frac{4}{40}$
   $\frac{16}{40} - \frac{12}{40} =$

7. $\frac{15}{20} + \left(\frac{35}{20} - \frac{32}{20}\right) = \frac{18}{20}$
   $\frac{15}{20} + \frac{3}{20} =$

8. $\frac{11}{77} + \frac{12}{77} + \frac{13}{77} = \frac{36}{77}$
   $\frac{23}{77} + \frac{13}{77} =$

9. $\frac{25}{54} - \frac{10}{54} - \frac{7}{54} = \frac{8}{54}$
   $\frac{15}{54} - \frac{7}{54} =$

10. $\frac{45}{82} - \left(\frac{30}{82} + \frac{15}{82}\right) = \frac{0}{82} = 0$
    $\frac{45}{82} - \frac{45}{82} =$

11. $\frac{14}{38} + \left(\frac{15}{38} - \frac{7}{38}\right) = \frac{22}{38}$
    $\frac{14}{38} + \frac{8}{38} =$

12. $\frac{26}{59} - \frac{6}{59} - \frac{10}{59} = \frac{10}{59}$
    $\frac{20}{59} - \frac{10}{59} =$

Instructions: Add or subtract these 'un-like' fractions using the LCD method you learned in the video. Show your work and you do **not** need to simplify your answers.

1 $\frac{2}{3} + \frac{1}{6}$

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

$\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$

2 $\frac{7}{12} - \frac{1}{6}$

$\frac{7}{12} - \frac{1}{6} \times \frac{2}{2}$

$\frac{7}{12} - \frac{2}{12} = \frac{5}{12}$

3 $\frac{15}{24} + \frac{5}{8}$

$\frac{15}{24} + \frac{5}{8} \times \frac{3}{3}$

$\frac{15}{24} + \frac{15}{24} = \frac{30}{24}$

4 $\frac{9}{10} - \frac{1}{5}$

$\frac{9}{10} - \frac{1}{5} \times \frac{2}{2}$

$\frac{9}{10} - \frac{2}{10} = \frac{7}{10}$

5 $\frac{3}{8} + \frac{3}{2}$

$\frac{3}{8} + \frac{3}{2} \times \frac{4}{4}$

$\frac{3}{8} + \frac{12}{8} = \frac{15}{8}$

6 $\frac{3}{7} + \frac{5}{14}$

$\frac{2}{2} \times \frac{3}{7} + \frac{5}{14}$

$\frac{6}{14} + \frac{5}{14} = \frac{11}{14}$

7 $\frac{5}{3} - \frac{3}{4}$

LCM

3	4
6	8
9	12
12	

$\frac{4}{4} \times \frac{5}{3} - \frac{3}{4} \times \frac{3}{3}$

$\frac{20}{12} - \frac{9}{12} = \frac{11}{12}$

8 $\frac{4}{6} - \frac{3}{8}$

LCM

6	8
12	16
18	24
24	

$\frac{4}{4} \times \frac{4}{6} - \frac{3}{8} \times \frac{3}{3}$

$\frac{16}{24} - \frac{9}{24} = \frac{7}{24}$

Instructions: Add or subtract these 'un-like' fractions using the LCD method you learned in the video. Show your work and you do **not** need to simplify your answers.

1 $\frac{1}{2} + \frac{3}{14}$

$\frac{7}{7} \times \frac{1}{2} + \frac{3}{14}$

$\frac{7}{14} + \frac{3}{14} = \frac{10}{14}$

2 $\frac{16}{30} + \frac{1}{10}$

$\frac{16}{30} + \frac{1}{10} \times \frac{3}{3}$

$\frac{16}{30} + \frac{3}{30} = \frac{19}{30}$

3 $\frac{7}{16} - \frac{1}{4}$

$\frac{7}{16} - \frac{1}{4} \times \frac{4}{4}$

$\frac{7}{16} - \frac{4}{16} = \frac{3}{16}$

4 $\frac{8}{11} - \frac{5}{22}$

$\frac{2}{2} \times \frac{8}{11} - \frac{5}{22}$

$\frac{16}{22} - \frac{5}{22} = \frac{11}{22}$

5 $\frac{4}{5} + \frac{2}{3}$

LCM

5	3
10	6
15	9
20	12
15	

$\frac{3}{3} \times \frac{4}{5} + \frac{2}{3} \times \frac{5}{5}$

$\frac{12}{15} + \frac{10}{15} = \frac{22}{15}$

6 $\frac{5}{6} - \frac{4}{30}$

$\frac{5}{5} \times \frac{5}{6} - \frac{4}{30}$

$\frac{25}{30} - \frac{4}{30} = \frac{21}{30}$

7 $\frac{5}{9} - \frac{10}{27}$

$\frac{3}{3} \times \frac{5}{9} - \frac{10}{27}$

$\frac{15}{27} - \frac{10}{27} = \frac{5}{27}$

8 $\frac{7}{9} - \frac{5}{12}$

LCM

9	12
18	24
27	36
36	

$\frac{4}{4} \times \frac{7}{9} - \frac{5}{12} \times \frac{3}{3}$

$\frac{28}{36} - \frac{15}{36} = \frac{13}{36}$

Instructions: Use the procedure you learned in the video to multiply these fractions. The 'dot' multiplication symbol is used in some problems. You do **not** need to simplify your answers.

1. $\frac{4}{6} \times \frac{4}{5} = \frac{16}{30}$
2. $\frac{3}{4} \times \frac{4}{6} = \frac{12}{24}$
3. $\frac{5}{6} \times \frac{2}{6} = \frac{10}{36}$
4. $\frac{4}{7} \times \frac{1}{8} = \frac{4}{56}$
5. $\frac{4}{7} \times \frac{5}{3} = \frac{20}{21}$
6. $\frac{6}{10} \cdot \frac{9}{7} = \frac{54}{70}$
7. $\frac{7}{6} \times \frac{5}{8} = \frac{35}{48}$
8. $\frac{5}{3} \times \frac{3}{5} = \frac{15}{15} = 1$
9. $\frac{3}{10} \times \frac{3}{4} = \frac{9}{40}$
10. $\frac{9}{5} \times \frac{1}{10} = \frac{9}{50}$
11. $\frac{1}{8} \cdot \frac{10}{5} = \frac{10}{40}$
12. $\frac{5}{8} \cdot \frac{5}{4} = \frac{25}{32}$
13. $\frac{2}{8} \times \frac{8}{2} = \frac{16}{16} = 1$
14. $\frac{3}{7} \cdot \frac{4}{7} = \frac{12}{49}$
15. $\frac{10}{11} \cdot \frac{3}{4} = \frac{30}{44}$
16. $\frac{10}{15} \times \frac{1}{2} = \frac{10}{30}$
17. $\frac{2}{3} \cdot \frac{9}{12} = \frac{18}{36}$
18. $\frac{1}{10} \cdot \frac{1}{10} = \frac{1}{100}$

Instructions: Use the procedure you learned in the video to multiply these fractions together. You do **not** need to simplify your answers.

1. $\frac{2}{3} \times \frac{4}{5} \times \frac{1}{3} = \frac{8}{45}$
2. $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} = \frac{6}{24}$
3. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{2}{3} = \frac{2}{24}$
4. $\frac{3}{4} \times \frac{1}{2} \times \frac{3}{4} \times \frac{1}{2} = \frac{9}{64}$
5. $\frac{2}{5} \times \frac{2}{6} \times \frac{2}{1} = \frac{8}{30}$
6. $\frac{7}{10} \times \frac{5}{10} \times \frac{1}{2} = \frac{35}{200}$
7. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{16}$
8. $\frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} = \frac{1}{81}$
9. $\frac{1}{3} \times \frac{3}{4} \times \frac{1}{2} \times \frac{2}{2} \times \frac{5}{1} = \frac{30}{48}$
10. $\frac{3}{4} \cdot \frac{2}{5} \cdot \frac{3}{4} = \frac{18}{80}$
11. $\frac{5}{3} \cdot \frac{2}{3} \cdot \frac{0}{7} = \frac{0}{63} = 0$
12. $\frac{5}{2} \times \frac{2}{7} \times \frac{1}{2} \times \frac{5}{1} = \frac{50}{28}$
13. $\frac{3}{2} \times \frac{1}{2} \times \frac{4}{5} \times \frac{3}{5} = \frac{36}{100}$
14. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{32}$

divisibility. (For the exercises on this page, you only need to try divisibility tests for 2,3,and 5.)
Mark the correct box.

1	2	☒ Prime ☐ NOT Prime	2	4	☐ Prime ☒ NOT Prime
3	3	☒ Prime ☐ NOT Prime	4	11	☒ Prime ☐ NOT Prime
5	15	☐ Prime ☒ NOT Prime	6	17	☒ Prime ☐ NOT Prime
7	10	☐ Prime ☒ NOT Prime	8	8	☐ Prime ☒ NOT Prime
9	7	☒ Prime ☐ NOT Prime	10	9	☐ Prime ☒ NOT Prime
11	6	☐ Prime ☒ NOT Prime	12	12	☐ Prime ☒ NOT Prime
13	31	☒ Prime ☐ NOT Prime	14	44	☐ Prime ☒ NOT Prime
15	14	☐ Prime ☒ NOT Prime	16	25	☐ Prime ☒ NOT Prime
17	20	☐ Prime ☒ NOT Prime	18	19	☒ Prime ☐ NOT Prime

More Prime Factorization Practice

Instructions: Factor each number down to its Prime Factorization. For each problem, make a 'factor tree' on some scratch paper to help you get the right answer.

1. 40 = 2 x 2 x 2 x 5 (Prime Factorization)
2. 50 = 2 x 5 x 5 (Prime Factorization)
3. 32 = 2 x 2 x 2 x 2 x 2 (Prime Factorization)
4. 72 = 2 x 2 x 2 x 3 x 3 (Prime Factorization)
5. 100 = 2 x 2 x 5 x 5 (Prime Factorization)
6. 150 = 2 x 3 x 5 x 5 (Prime Factorization)
7. 175 = 5 x 5 x 7 (Prime Factorization)
8. 66 = 2 x 3 x 11 (Prime Factorization)
9. 270 = 2 x 3 x 3 x 3 x 5 (Prime Factorization)
10. 102 = 2 x 3 x 17 (Prime Factorization)
11. 160 = 2 x 2 x 2 x 2 x 2 x 5