

Incoming 7th Summer work:

Here is some work and videos that you can use to keep math alive this summer.

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>

Order of operations/ integers and one step equations:

https://www.youtube.com/watch?v=_BgblvF90UE

https://www.youtube.com/watch?v=K_tPbVPfHgk

<https://www.youtube.com/watch?v=l3XzepN03KQ>

https://www.youtube.com/watch?v=Qyd_v3DGzTM

<https://www.youtube.com/watch?v=dAgfnK528RA>

Practice worksheets— (remember to simplify all fractions. Also, remember to cross cancel with multiplying or dividing in order to get simplified answers.)

<https://docs.google.com/document/d/1ryfhOutkt89JRikLv-qlOwfKZ-wqmw4RDCB6ZNhVwV0/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 $5.8 + 12.4$

2 $3.2 + 0.5$

3 $10.9 + 0.12$

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

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 $9.23 - 4.5$

2 $8.0 - 0.6$

3 $12 - 1.3$

$$\begin{array}{r} 8 \\ \cancel{9} \cdot 23 \\ - 4.50 \\ \hline 4.73 \end{array}$$

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 Division

DA 4

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

$$\begin{array}{r} 3.15 \\ 2.3 \overline{)7.245} \\ \underline{-69} \\ 34 \\ \underline{-23} \\ 115 \\ \underline{-115} \\ 0 \end{array}$$

$$2 \quad 1.1 \overline{)25.85}$$

$$3 \quad 8 \overline{)69.6}$$

$$4 \quad 0.12 \overline{)5.676}$$

$$5 \quad 2.5 \overline{)3675}$$

$$6 \quad 1.4 \overline{)284.2}$$

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.

$$1 \quad \frac{12}{14} = \frac{\cancel{2} \times 2 \times 3}{\cancel{2} \times 7} = \frac{6}{7}$$

$$2 \quad \frac{5}{10} = \underline{\hspace{2cm}} =$$

$$3 \quad \frac{6}{9} = \underline{\hspace{2cm}} =$$

$$4 \quad \frac{9}{12} = \underline{\hspace{2cm}} =$$

$$5 \quad \frac{7}{21} = \underline{\hspace{2cm}} =$$

$$6 \quad \frac{14}{16} = \underline{\hspace{2cm}} =$$

$$7 \quad \frac{7}{14} = \underline{\hspace{2cm}} =$$

$$8 \quad \frac{15}{40} = \underline{\hspace{2cm}} =$$

$$9 \quad \frac{5}{20} = \underline{\hspace{2cm}} =$$

$$10 \quad \frac{22}{44} = \underline{\hspace{2cm}} =$$

$$11 \quad \frac{8}{12} = \underline{\hspace{2cm}} =$$

$$12 \quad \frac{20}{24} = \underline{\hspace{2cm}} =$$

$$13 \quad \frac{10}{15} = \underline{\hspace{2cm}} =$$

$$14 \quad \frac{25}{30} = \underline{\hspace{2cm}} =$$

$$15 \quad \frac{18}{24} = \underline{\hspace{2cm}} =$$

$$16 \quad \frac{16}{36} = \underline{\hspace{2cm}} =$$

$$17 \quad \frac{10}{25} = \underline{\hspace{2cm}} =$$

$$18 \quad \frac{35}{50} = \underline{\hspace{2cm}} =$$

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.

$$1 \quad \frac{15}{20} = \frac{3 \times 5}{2 \times 2 \times 5} = \frac{3}{4}$$

$$2 \quad \frac{16}{30} = \underline{\hspace{2cm}} =$$

$$3 \quad \frac{12}{18} = \underline{\hspace{2cm}} =$$

$$4 \quad \frac{15}{45} = \underline{\hspace{2cm}} =$$

$$5 \quad \frac{20}{25} = \underline{\hspace{2cm}} =$$

$$6 \quad \frac{27}{39} = \underline{\hspace{2cm}} =$$

$$7 \quad \frac{14}{21} = \underline{\hspace{2cm}} =$$

$$8 \quad \frac{48}{72} = \underline{\hspace{2cm}} =$$

$$9 \quad \frac{20}{32} = \underline{\hspace{2cm}} =$$

$$10 \quad \frac{32}{40} = \underline{\hspace{2cm}} =$$

$$11 \quad \frac{18}{36} = \underline{\hspace{2cm}} =$$

$$12 \quad \frac{45}{125} = \underline{\hspace{2cm}} =$$

$$13 \quad \frac{42}{63} = \underline{\hspace{2cm}} =$$

$$14 \quad \frac{63}{105} = \underline{\hspace{2cm}} =$$

$$15 \quad \frac{60}{75} = \underline{\hspace{2cm}} =$$

$$16 \quad \frac{42}{140} = \underline{\hspace{2cm}} =$$

$$17 \quad \frac{36}{84} = \underline{\hspace{2cm}} =$$

$$18 \quad \frac{33}{121} = \underline{\hspace{2cm}} =$$

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

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

$$2 \quad \frac{3}{25} + \frac{30}{25} =$$

$$3 \quad \frac{20}{32} + \frac{7}{32} =$$

$$4 \quad \frac{17}{30} + \frac{5}{30} =$$

$$5 \quad \frac{3}{15} + \frac{3}{15} =$$

$$6 \quad \frac{12}{16} - \frac{11}{16} =$$

$$7 \quad \frac{50}{44} - \frac{48}{44} =$$

$$8 \quad \frac{27}{79} - \frac{23}{79} =$$

$$9 \quad \frac{15}{18} + \frac{4}{18} =$$

$$10 \quad \frac{11}{22} + \frac{10}{22} =$$

$$11 \quad \frac{28}{50} - \frac{16}{50} =$$

$$12 \quad \frac{8}{46} - \frac{3}{46} =$$

$$13 \quad \frac{9}{11} - \frac{6}{11} =$$

$$14 \quad \frac{96}{136} + \frac{6}{136} =$$

$$15 \quad \frac{21}{24} + \frac{20}{24} =$$

$$16 \quad \frac{35}{98} + \frac{35}{98} =$$

$$17 \quad \frac{68}{80} - \frac{50}{80} =$$

$$18 \quad \frac{20}{31} + \frac{13}{31} =$$

$$19 \quad \frac{15}{38} + \frac{5}{38} =$$

$$20 \quad \frac{19}{19} - \frac{8}{19} =$$

$$\begin{aligned} \text{1} \quad \frac{3}{10} + \frac{6}{10} - \frac{5}{10} &= \frac{4}{10} \\ \frac{9}{10} - \frac{5}{10} &= \end{aligned}$$

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

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

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

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

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

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

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

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

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

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

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

Un-Guided Practice with the LCD Method

LCD

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.

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

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

$$\frac{4}{6} + \frac{1}{6} = \left(\frac{5}{6} \right)$$

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

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

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

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

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

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

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

Un-Guided Practice with the LCD Method - Set 2

LCD (

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

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

$$\frac{7}{14} + \frac{3}{14} = \left(\frac{10}{14}\right)$$

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 your 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.

$$\begin{aligned} \mathbf{1} \quad \frac{3}{5} \div 2 &= \frac{3}{5} \div \frac{2}{1} \\ &= \frac{3}{5} \times \frac{1}{2} = \frac{3}{10} \end{aligned}$$

$$\mathbf{2} \quad 5 \div \frac{3}{8} =$$

$$\mathbf{3} \quad \frac{1}{4} \div 3 =$$

$$\mathbf{4} \quad 10 \div \frac{9}{2} =$$

$$\mathbf{5} \quad \frac{6}{7} \div 5 =$$

$$\mathbf{6} \quad \frac{1}{4} \div 4 =$$

$$\mathbf{7} \quad 9 \div \frac{4}{7} =$$

$$\mathbf{8} \quad 8 \div \frac{3}{4} =$$

$$\mathbf{9} \quad \frac{5}{12} \div 2 =$$

$$\mathbf{10} \quad 4 \div \frac{1}{10} =$$

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.

$$\begin{aligned} \text{1} \quad & \frac{3}{4} \div \frac{2}{5} \\ & \frac{3}{4} \times \frac{5}{2} = \frac{15}{8} \end{aligned}$$

$$\begin{aligned} \text{2} \quad & \frac{5}{4} \div \frac{2}{3} \\ & \frac{5}{4} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{3} \quad & \frac{1}{7} \div \frac{1}{4} \\ & \frac{1}{7} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{4} \quad & \frac{8}{13} \div \frac{1}{2} \\ & \frac{8}{13} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{5} \quad & \frac{3}{5} \div \frac{1}{6} \\ & \frac{3}{5} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{6} \quad & \frac{4}{8} \div \frac{5}{1} \\ & \frac{4}{8} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{7} \quad & \frac{5}{8} \div \frac{3}{4} \\ & \frac{5}{8} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{8} \quad & \frac{1}{12} \div \frac{1}{12} \\ & \frac{1}{12} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{9} \quad & \frac{7}{9} \div \frac{2}{3} \\ & \frac{7}{9} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{10} \quad & \frac{1}{8} \div \frac{3}{16} \\ & \frac{1}{8} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{11} \quad & \frac{5}{11} \div \frac{4}{7} \\ & \frac{5}{11} \times \text{---} = \end{aligned}$$

$$\begin{aligned} \text{12} \quad & \frac{9}{10} \div \frac{5}{6} \\ & \frac{9}{10} \times \text{---} = \end{aligned}$$

Order Of Operations Practice

OPS 5

Instructions: Use the Order of Operations Rules to simplify each expression. Write your answer in the space provided and be sure to show your work.

1 $2 \times (4^2 - 4) = \underline{24}$
 $2 \times (16 - 4)$
 2×12
 24

2 $14 - (3 + 5) \div 2^2 = \underline{\quad}$

3 $(1 + 3^2) \times 5 = \underline{\quad}$

4 $7 \times (7 - 1) + 3 = \underline{\quad}$

5 $40 \div (12 - 7) = \underline{\quad}$

6 $7^2 - (5 + 24) = \underline{\quad}$

7 $2^3 + 30 \div (7 + 3) = \underline{\quad}$

8 $(3^2 \times 3) - (2 + 5^2) = \underline{\quad}$

9 $(24 + 6) \div (14 - 4 \times 2) = \underline{\quad}$

10 $[20 - (3 + 4) \times 2] + 5 = \underline{\quad}$

11 $6^2 - (11 + 3) \times 2 = \underline{\quad}$

12 $[2^3 + (15 - 7)] \div 8 = \underline{\quad}$

1 $2 - -4$
 $2 + 4$
 6

2 $1 - -1$

3 $5 + 5$

4 $7 - -1$

5 $8 + 8$

6 $3 - -10$

7 $12 - -3$

8 $5 + 11$

9 $7 + 5$

10 $8 - -12$

11 $6 - -3$

12 $15 - -10$

13 $19 + 5$

14 $25 - -10$

15 $0 - -2$

$$1 \quad (-1)(-1)(-1) = -1$$

$$2 \quad (1)(-1)(-1) =$$

$$3 \quad (1)(-1)(1)(-1) =$$

$$4 \quad (1)(-1)(-1)(-1) =$$

$$5 \quad (-1)(-1)(-1)(-1) =$$

$$6 \quad (-1)(1)(-1)(-1) =$$

$$7 \quad (-1)(-1)(-1)(-1)(-1) =$$

$$8 \quad (-1)(1)(-1)(-1)(-1) =$$

Instructions: Multiply these integers.

$$1 \quad 3 \times -3 = -9$$

$$2 \quad -4 \times -4 =$$

$$3 \quad -8 \times 2 =$$

$$4 \quad 5 \times -6 =$$

$$5 \quad -6 \times -3 =$$

$$6 \quad -3 \times -7 =$$

$$7 \quad 12 \times -4 =$$

$$8 \quad -10 \times 10 =$$

$$9 \quad -3 \times -3 \times -3 =$$

$$10 \quad 7 \times -1 \times -7 =$$

$$11 \quad 4 \times -5 \times 3 =$$

$$12 \quad -8 \times -2 \times 5 =$$

$$13 \quad (-3)(2)(-1)(-6) =$$

$$14 \quad (-2)(-2)(-2)(-2) =$$

$1 \quad 15 \div -5 = -3$

$2 \quad 10 \div -2 =$

$3 \quad \frac{-20}{-10} =$

$4 \quad \frac{-12}{3} =$

$5 \quad -25 \div 5 =$

$6 \quad \frac{-16}{-4} =$

$7 \quad -36 \div -6 =$

$8 \quad \frac{60}{-10} =$

$9 \quad \frac{-49}{-7} =$

$10 \quad \frac{45}{-9} =$

$11 \quad 48 \div -6 =$

$12 \quad -30 \div -5 =$

$13 \quad -56 \div 8 =$

$14 \quad \frac{-90}{10} =$

$15 \quad \frac{-88}{-11} =$

$16 \quad \frac{-50}{-25} =$

$17 \quad 77 \div -7 =$

$18 \quad \frac{-32}{8} =$

Solving Basic Equations (with negative numbers)

SE1 4

Instructions: Use addition or subtraction to solve each equation.

1 $x + 2 = -4$

2 $x - 8 = -3$

3 $-7 = x - 7$

4 $-15 = x + 13$

5 $x - 10 = -1$

6 $-1 - x = -8$

7 $-25 + x = -8$

8 $-14 + x = 10$

9 $-30 - x = -25$

10 $x - 20 = -6$

Solving Basic Equations (with Negative Numbers)

SE2 4

Instructions: Use multiplication or division to solve each equation.

1 $\frac{x}{5} = -6$

2 $-3x = -21$

3 $3 = \frac{-12}{x}$

4 $\frac{-28}{x} = -4$

5 $\frac{x}{-7} = 9$

6 $15x = -45$

7 $\frac{x}{-8} = -1$

8 $55 = -5x$

9 $-72 = -8x$

10 $9 = \frac{-45}{x}$

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 $5.8 + 12.4$

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

2 $3.2 + 0.5$

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

3 $10.9 + 0.12$

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

4 $245 + 8.9$

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

5 $17.2 + 25.6$

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

6 $83.6 + 2.125$

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

7 $0.412 + 0.65$

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

8 $33.75 + 9.8$

$$\begin{array}{r} 11 \\ 33.75 \\ + 9.80 \\ \hline 43.55 \end{array}$$

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 $9.23 - 4.5$

$$\begin{array}{r} 8 \\ 9.23 \\ - 4.50 \\ \hline 4.73 \end{array}$$

2 $8.0 - 0.6$

$$\begin{array}{r} 7 \\ 8.0 \\ - 0.6 \\ \hline 7.4 \end{array}$$

3 $12 - 1.3$

$$\begin{array}{r} 1 \\ 12.0 \\ - 1.3 \\ \hline 10.7 \end{array}$$

4 $8.9 - 5.7$

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

5 $50.7 - 42.1$

$$\begin{array}{r} 4 \\ 50.7 \\ - 42.1 \\ \hline 8.6 \end{array}$$

6 $81.3 - 6.75$

$$\begin{array}{r} 71012 \\ 81.30 \\ - 6.75 \\ \hline 74.55 \end{array}$$

7 $129.8 - 85.4$

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

8 $0.745 - 0.561$

$$\begin{array}{r} 6 \\ 0.745 \\ - 0.561 \\ \hline 0.184 \end{array}$$

9 $4.925 - 3.8$

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

1 3.2×5.26

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

2 4.5×2.4

$$\begin{array}{r} \overset{1}{\downarrow} \\ 4.5 \\ \times 2.4 \\ \hline 180 \\ + 900 \\ \hline 10.80 \end{array}$$

3 0.25×0.11

$$\begin{array}{r} \overset{1}{\downarrow} \\ 0.25 \\ \times 0.11 \\ \hline 25 \\ + 250 \\ \hline 0.0275 \end{array}$$

4 62×1.8

$$\begin{array}{r} \overset{1}{\downarrow} \\ 62 \\ \times 1.8 \\ \hline 496 \\ + 620 \\ \hline 111.6 \end{array}$$

5 316×2.8

$$\begin{array}{r} \overset{1}{\downarrow} \\ 316 \\ \times 2.8 \\ \hline 2528 \\ + 6320 \\ \hline 884.8 \end{array}$$

6 0.125×65

$$\begin{array}{r} \overset{1}{\downarrow} \\ 0.125 \\ \times 65 \\ \hline 625 \\ + 7500 \\ \hline 8.125 \end{array}$$

7 9.23×3.1

$$\begin{array}{r} \overset{1}{\downarrow} \\ 9.23 \\ \times 3.1 \\ \hline 923 \\ + 27690 \\ \hline 28.613 \end{array}$$

8 0.34×0.216

$$\begin{array}{r} \overset{1}{\downarrow} \\ 0.216 \\ \times 0.34 \\ \hline 864 \\ + 6480 \\ \hline 0.07344 \end{array}$$

9 70.4×3.4

$$\begin{array}{r} \overset{1}{\downarrow} \\ 70.4 \\ \times 3.4 \\ \hline 2816 \\ + 21120 \\ \hline 239.36 \end{array}$$

1 $2.3 \overline{)7.245}$

$$\begin{array}{r} \overset{3}{\downarrow} \\ 2.3 \overline{)7.245} \\ \underline{-69} \\ 34 \\ \underline{-23} \\ 115 \\ \underline{-115} \\ 0 \end{array}$$

2 $1.1 \overline{)25.85}$

$$\begin{array}{r} \overset{23}{\downarrow} \\ 1.1 \overline{)25.85} \\ \underline{-22} \\ 38 \\ \underline{-33} \\ 55 \\ \underline{-55} \\ 0 \end{array}$$

3 $8 \overline{)69.6}$

$$\begin{array}{r} \overset{8}{\downarrow} \\ 8 \overline{)69.6} \\ \underline{-64} \\ 56 \\ \underline{-56} \\ 0 \end{array}$$

4 $0.12 \overline{)5.676}$

$$\begin{array}{r} \overset{47}{\downarrow} \\ 0.12 \overline{)5.676} \\ \underline{-48} \\ 87 \\ \underline{-84} \\ 36 \\ \underline{-36} \\ 0 \end{array}$$

5 $2.5 \overline{)36750}$

$$\begin{array}{r} \overset{1470}{\downarrow} \\ 2.5 \overline{)36750} \\ \underline{-25} \\ 117 \\ \underline{-100} \\ 175 \\ \underline{-175} \\ 0 \end{array}$$

6 $1.4 \overline{)2842}$

$$\begin{array}{r} \overset{203}{\downarrow} \\ 1.4 \overline{)2842} \\ \underline{-28} \\ 042 \\ \underline{-42} \\ 0 \end{array}$$

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.

$$1 \quad \frac{12}{14} = \frac{\cancel{2} \times 2 \times 3}{\cancel{2} \times 7} = \frac{6}{7}$$

$$2 \quad \frac{5}{10} = \frac{\cancel{5} \times 1}{\cancel{5} \times 2} = \frac{1}{2}$$

$$3 \quad \frac{6}{9} = \frac{\cancel{3} \times 2}{\cancel{3} \times 3} = \frac{2}{3}$$

$$4 \quad \frac{9}{12} = \frac{\cancel{3} \times 3}{\cancel{2} \times 2 \times 3} = \frac{3}{4}$$

$$5 \quad \frac{7}{21} = \frac{\cancel{1} \times \cancel{7}}{\cancel{3} \times \cancel{7}} = \frac{1}{3}$$

$$6 \quad \frac{14}{16} = \frac{\cancel{2} \times 7}{\cancel{2} \times 2 \times 2 \times 2} = \frac{7}{8}$$

$$7 \quad \frac{7}{14} = \frac{\cancel{1} \times \cancel{7}}{\cancel{2} \times \cancel{7}} = \frac{1}{2}$$

$$8 \quad \frac{15}{40} = \frac{\cancel{5} \times 3}{\cancel{2} \times 2 \times 2 \times 5} = \frac{3}{8}$$

$$9 \quad \frac{5}{20} = \frac{\cancel{1} \times 5}{\cancel{2} \times 2 \times 5} = \frac{1}{4}$$

$$10 \quad \frac{22}{44} = \frac{\cancel{2} \times 11}{\cancel{2} \times 2 \times 11} = \frac{1}{2}$$

$$11 \quad \frac{8}{12} = \frac{\cancel{2} \times \cancel{2} \times 2}{\cancel{2} \times \cancel{2} \times 3} = \frac{2}{3}$$

$$12 \quad \frac{20}{24} = \frac{\cancel{2} \times \cancel{2} \times 5}{\cancel{2} \times \cancel{2} \times 2 \times 3} = \frac{5}{6}$$

$$13 \quad \frac{10}{15} = \frac{\cancel{5} \times 2}{\cancel{3} \times 5} = \frac{2}{3}$$

$$14 \quad \frac{25}{30} = \frac{\cancel{5} \times 5}{\cancel{5} \times 2 \times 3} = \frac{5}{6}$$

$$15 \quad \frac{18}{24} = \frac{\cancel{2} \times \cancel{3} \times 3}{\cancel{2} \times \cancel{2} \times 2 \times 3} = \frac{3}{4}$$

$$16 \quad \frac{16}{36} = \frac{\cancel{2} \times \cancel{2} \times \cancel{2} \times 2}{\cancel{2} \times 3 \times \cancel{2} \times 3} = \frac{4}{9}$$

$$17 \quad \frac{10}{25} = \frac{\cancel{5} \times 2}{\cancel{5} \times 5} = \frac{2}{5}$$

$$18 \quad \frac{35}{50} = \frac{\cancel{5} \times 7}{\cancel{2} \times \cancel{5} \times 5} = \frac{7}{10}$$

$$1 \quad \frac{15}{20} = \frac{\cancel{5} \times 3}{\cancel{2} \times 2 \times 5} = \frac{3}{4}$$

$$2 \quad \frac{16}{30} = \frac{\cancel{2} \times \cancel{2} \times \cancel{2} \times 2}{\cancel{2} \times 3 \times 5} = \frac{8}{15}$$

$$3 \quad \frac{12}{18} = \frac{\cancel{2} \times \cancel{2} \times 3}{\cancel{2} \times 3 \times 3} = \frac{2}{3}$$

$$4 \quad \frac{15}{45} = \frac{\cancel{3} \times 5}{\cancel{3} \times 3 \times 5} = \frac{1}{3}$$

$$5 \quad \frac{20}{25} = \frac{\cancel{5} \times \cancel{2} \times 2 \times 5}{\cancel{5} \times 5} = \frac{4}{5}$$

$$6 \quad \frac{27}{39} = \frac{\cancel{3} \times \cancel{3} \times 3}{\cancel{3} \times 13} = \frac{9}{13}$$

$$7 \quad \frac{14}{21} = \frac{\cancel{2} \times \cancel{7}}{\cancel{3} \times \cancel{7}} = \frac{2}{3}$$

$$8 \quad \frac{48}{72} = \frac{\cancel{2} \times \cancel{2} \times \cancel{2} \times 2 \times 3}{\cancel{2} \times \cancel{2} \times \cancel{2} \times 3 \times 3} = \frac{2}{3}$$

$$9 \quad \frac{20}{32} = \frac{\cancel{2} \times \cancel{2} \times 5}{\cancel{2} \times \cancel{2} \times 2 \times 2 \times 2} = \frac{5}{8}$$

$$10 \quad \frac{32}{40} = \frac{\cancel{2} \times \cancel{2} \times \cancel{2} \times 2 \times 2}{\cancel{2} \times \cancel{2} \times 2 \times 5} = \frac{4}{5}$$

$$11 \quad \frac{18}{36} = \frac{\cancel{2} \times \cancel{3} \times 3}{\cancel{2} \times \cancel{3} \times 2 \times 3} = \frac{1}{2}$$

$$12 \quad \frac{45}{125} = \frac{\cancel{3} \times \cancel{3} \times 5}{\cancel{5} \times 5 \times 5} = \frac{9}{25}$$

$$13 \quad \frac{42}{63} = \frac{\cancel{2} \times \cancel{3} \times 7}{\cancel{3} \times \cancel{3} \times 7} = \frac{2}{3}$$

$$14 \quad \frac{63}{105} = \frac{\cancel{3} \times \cancel{3} \times 7}{\cancel{5} \times \cancel{3} \times 7} = \frac{3}{5}$$

$$15 \quad \frac{60}{75} = \frac{\cancel{2} \times \cancel{3} \times \cancel{2} \times 5}{\cancel{3} \times \cancel{5} \times 5} = \frac{4}{5}$$

$$16 \quad \frac{42}{140} = \frac{\cancel{2} \times \cancel{3} \times 7}{\cancel{2} \times 2 \times 5 \times 7} = \frac{3}{10}$$

$$17 \quad \frac{36}{84} = \frac{\cancel{2} \times \cancel{2} \times \cancel{3} \times 3}{\cancel{2} \times \cancel{2} \times \cancel{3} \times 7} = \frac{3}{7}$$

$$18 \quad \frac{33}{121} = \frac{\cancel{3} \times 11}{\cancel{11} \times 11} = \frac{3}{11}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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

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

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

$$\frac{9}{8} - \frac{6}{8} = \frac{3}{8}$$

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

$$\frac{13}{15} - \frac{4}{15} = \frac{9}{15}$$

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

$$\frac{50}{61} - \frac{5}{61} = \frac{45}{61}$$

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

$$\frac{10}{26} + \frac{7}{26} = \frac{17}{26}$$

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

$$\frac{16}{40} - \frac{12}{40} = \frac{4}{40}$$

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

$$\frac{15}{20} + \frac{3}{20} = \frac{18}{20}$$

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

$$\frac{23}{77} + \frac{13}{77} = \frac{36}{77}$$

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

$$\frac{15}{54} - \frac{7}{54} = \frac{8}{54}$$

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

$$\frac{45}{82} - \frac{45}{82} = 0$$

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

$$\frac{14}{38} + \frac{8}{38} = \frac{22}{38}$$

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

$$\frac{20}{59} - \frac{10}{59} = \frac{10}{59}$$

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.

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

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

$$\frac{4}{6} + \frac{1}{6} = \left(\frac{5}{6}\right)$$

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

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

$$\frac{7}{12} - \frac{2}{12} = \left(\frac{5}{12}\right)$$

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

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

$$\frac{15}{24} + \frac{15}{24} = \left(\frac{30}{24}\right)$$

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

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

$$\frac{9}{10} - \frac{2}{10} = \left(\frac{7}{10}\right)$$

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

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

$$\frac{3}{8} + \frac{12}{8} = \left(\frac{15}{8}\right)$$

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

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

$$\frac{6}{14} + \frac{5}{14} = \left(\frac{11}{14}\right)$$

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

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

$$\frac{20}{12} - \frac{9}{12} = \left(\frac{11}{12}\right)$$

LCM

3	4
6	8
9	12
12	

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

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

$$\frac{16}{24} - \frac{9}{24} = \left(\frac{7}{24}\right)$$

LCM

6	8
12	16
18	24
24	

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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.

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

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

$$\frac{7}{14} + \frac{3}{14} = \left(\frac{10}{14}\right)$$

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

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

$$\frac{16}{30} + \frac{3}{30} = \left(\frac{19}{30}\right)$$

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

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

$$\frac{7}{16} - \frac{4}{16} = \left(\frac{3}{16}\right)$$

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

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

$$\frac{16}{22} - \frac{5}{22} = \left(\frac{11}{22}\right)$$

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

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

$$\frac{12}{15} + \frac{10}{15} = \left(\frac{22}{15}\right)$$

LCM

5	3
10	6
15	9
20	12
15	

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

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

$$\frac{25}{30} - \frac{4}{30} = \left(\frac{21}{30}\right)$$

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

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

$$\frac{15}{27} - \frac{10}{27} = \left(\frac{5}{27}\right)$$

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

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

$$\frac{28}{36} - \frac{15}{36} = \left(\frac{13}{36}\right)$$

LCM

9	12
18	24
27	36
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.

$$1 \quad \frac{4}{6} \times \frac{4}{5} = \frac{16}{30}$$

$$2 \quad \frac{3}{4} \times \frac{4}{6} = \frac{12}{24}$$

$$3 \quad \frac{5}{6} \times \frac{2}{6} = \frac{10}{36}$$

$$4 \quad \frac{4}{7} \times \frac{1}{8} = \frac{4}{56}$$

$$5 \quad \frac{4}{7} \times \frac{5}{3} = \frac{20}{21}$$

$$6 \quad \frac{6}{10} \cdot \frac{9}{7} = \frac{54}{70}$$

$$7 \quad \frac{7}{6} \times \frac{5}{8} = \frac{35}{48}$$

$$8 \quad \frac{5}{3} \times \frac{3}{5} = \frac{15}{15} = 1$$

$$9 \quad \frac{3}{10} \times \frac{3}{4} = \frac{9}{40}$$

$$10 \quad \frac{9}{5} \times \frac{1}{10} = \frac{9}{50}$$

$$11 \quad \frac{1}{8} \cdot \frac{10}{5} = \frac{10}{40}$$

$$12 \quad \frac{5}{8} \cdot \frac{5}{4} = \frac{25}{32}$$

$$13 \quad \frac{2}{8} \times \frac{8}{2} = \frac{16}{16} = 1$$

$$14 \quad \frac{3}{7} \cdot \frac{4}{7} = \frac{12}{49}$$

$$15 \quad \frac{10}{11} \cdot \frac{3}{4} = \frac{30}{44}$$

$$16 \quad \frac{10}{15} \times \frac{1}{2} = \frac{10}{30}$$

$$17 \quad \frac{2}{3} \cdot \frac{9}{12} = \frac{18}{36}$$

$$18 \quad \frac{1}{10} \cdot \frac{1}{10} = \frac{1}{100}$$

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

$$1 \quad \frac{2}{3} \times \frac{4}{5} \times \frac{1}{3} = \frac{8}{45}$$

$$2 \quad \frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} = \frac{6}{24}$$

$$3 \quad \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{2}{3} = \frac{2}{24}$$

$$4 \quad \frac{3}{4} \times \frac{1}{2} \times \frac{3}{4} \times \frac{1}{2} = \frac{9}{64}$$

$$5 \quad \frac{2}{5} \times \frac{2}{6} \times \frac{2}{1} = \frac{8}{30}$$

$$6 \quad \frac{7}{10} \times \frac{5}{10} \times \frac{1}{2} = \frac{35}{200}$$

$$7 \quad \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{16}$$

$$8 \quad \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} \cdot \frac{1}{3} = \frac{1}{81}$$

$$9 \quad \frac{1}{3} \times \frac{3}{4} \times \frac{1}{2} \times \frac{2}{2} \times \frac{5}{1} = \frac{30}{48}$$

$$10 \quad \frac{3}{4} \cdot \frac{2}{5} \cdot \frac{3}{4} = \frac{18}{80}$$

$$11 \quad \frac{5}{3} \cdot \frac{2}{3} \cdot \frac{0}{7} = \frac{0}{63} = 0$$

$$12 \quad \frac{5}{2} \times \frac{2}{7} \times \frac{1}{2} \times \frac{5}{1} = \frac{50}{28}$$

$$13 \quad \frac{3}{2} \times \frac{1}{2} \times \frac{4}{5} \times \frac{3}{5} = \frac{36}{100}$$

$$14 \quad \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{32}$$

Order Of Operations Practice

OPS 5

Instructions: Use the Order of Operations Rules to simplify each expression. Write your answer in the space provided and be sure to show your work.

$$\begin{aligned} 1 \quad & 2 \times (4^2 - 4) = \underline{24} \\ & 2 \times (16 - 4) \\ & 2 \times 12 \\ & 24 \end{aligned}$$

$$\begin{aligned} 2 \quad & 14 - (3 + 5) \div 2^2 = \underline{12} \\ & 14 - 8 \div 2^2 \\ & 14 - 8 \div 4 \\ & 14 - 2 \\ & 12 \end{aligned}$$

$$\begin{aligned} 3 \quad & (1 + 3^2) \times 5 = \underline{50} \\ & (1 + 9) \times 5 \\ & 10 \times 5 \\ & 50 \end{aligned}$$

$$\begin{aligned} 4 \quad & 7 \times (7 - 1) + 3 = \underline{45} \\ & 7 \times 6 + 3 \\ & 42 + 3 \\ & 45 \end{aligned}$$

$$\begin{aligned} 5 \quad & 40 \div (12 - 7) = \underline{8} \\ & 40 \div 5 \\ & 8 \end{aligned}$$

$$\begin{aligned} 6 \quad & 7^2 - (5 + 24) = \underline{20} \\ & 7^2 - 29 \\ & 49 - 29 \\ & 20 \end{aligned}$$

$$\begin{aligned} 7 \quad & 2^3 + 30 \div (7 + 3) = \underline{11} \\ & 2^3 + 30 \div 10 \\ & 8 + 30 \div 10 \\ & 8 + 3 \\ & 11 \end{aligned}$$

$$\begin{aligned} 8 \quad & (3^2 \times 3) - (2 + 5^2) = \underline{0} \\ & (9 \times 3) - (2 + 25) \\ & 27 - 27 \\ & 0 \end{aligned}$$

$$\begin{aligned} 9 \quad & (24 + 6) \div (14 - 4 \times 2) = \underline{5} \\ & 30 \div (14 - 8) \\ & 30 \div 6 \\ & 5 \end{aligned}$$

$$\begin{aligned} 10 \quad & [20 - (3 + 4) \times 2] + 5 = \underline{11} \\ & [20 - (7) \times 2] + 5 \\ & [20 - 14] + 5 \\ & [6] + 5 \\ & 11 \end{aligned}$$

$$\begin{aligned} 11 \quad & 6^2 - (11 + 3) \times 2 = \underline{8} \\ & 6^2 - 14 \times 2 \\ & 36 - 14 \times 2 \\ & 36 - 28 \\ & 8 \end{aligned}$$

$$\begin{aligned} 12 \quad & [2^3 + (15 - 7)] \div 8 = \underline{2} \\ & [2^3 + 8] \div 8 \\ & [8 + 8] \div 8 \\ & 16 \div 8 \\ & 2 \end{aligned}$$

different ways they can be written. Rule #2 says, "Subtracting a negative is the same as adding a positive". So when you see the "minus minus", remember you can just change it to "plus".

1 $2 - -4$
 $2 + 4$
 6

2 $1 - -1$
 $1 + 1$
 2

3 $5 + 5$
 10

4 $7 - -1$
 $7 + 1$
 8

5 $8 + 8$
 16

6 $3 - -10$
 $3 + 10$
 13

7 $12 - -3$
 $12 + 3$
 15

8 $5 + 11$
 16

9 $7 + 5$
 12

10 $8 - -12$
 $8 + 12$
 20

11 $6 - -3$
 $6 + 3$
 9

12 $15 - -10$
 $15 + 10$
 25

13 $19 + 5$
 24

14 $25 - -10$
 $25 + 10$
 35

15 $0 - -2$
 $0 + 2$
 2

- | | |
|-------------------------------|------------------------------|
| 1 $(-1)(-1)(-1) = -1$ | 2 $(1)(-1)(-1) = +1$ |
| 3 $(1)(-1)(1)(-1) = +1$ | 4 $(1)(-1)(-1)(-1) = -1$ |
| 5 $(-1)(-1)(-1)(-1) = +1$ | 6 $(-1)(1)(-1)(-1) = -1$ |
| 7 $(-1)(-1)(-1)(-1)(-1) = -1$ | 8 $(-1)(1)(-1)(-1)(-1) = +1$ |

Instructions: Multiply these integers.

- | | |
|----------------------------------|---------------------------------|
| 1 $3 \times -3 = -9$ | 2 $-4 \times -4 = 16$ |
| 3 $-8 \times 2 = -16$ | 4 $5 \times -6 = -30$ |
| 5 $-6 \times -3 = 18$ | 6 $-3 \times -7 = 21$ |
| 7 $12 \times -4 = -48$ | 8 $-10 \times 10 = -100$ |
| 9 $-3 \times -3 \times -3 = -27$ | 10 $7 \times -1 \times -7 = 49$ |
| 11 $4 \times -5 \times 3 = -60$ | 12 $-8 \times -2 \times 5 = 80$ |
| 13 $(-3)(2)(-1)(-6) = -36$ | 14 $(-2)(-2)(-2)(-2) = 16$ |

- | | | |
|--------------------------|--------------------------|--------------------------|
| 1 $15 \div -5 = -3$ | 2 $10 \div -2 = -5$ | 3 $\frac{-20}{-10} = 2$ |
| 4 $\frac{-12}{3} = -4$ | 5 $-25 \div 5 = -5$ | 6 $\frac{-16}{-4} = 4$ |
| 7 $-36 \div -6 = 6$ | 8 $\frac{60}{-10} = -6$ | 9 $\frac{-49}{-7} = 7$ |
| 10 $\frac{45}{-9} = -5$ | 11 $48 \div -6 = -8$ | 12 $-30 \div -5 = 6$ |
| 13 $-56 \div 8 = -7$ | 14 $\frac{-90}{10} = -9$ | 15 $\frac{-88}{-11} = 8$ |
| 16 $\frac{-50}{-25} = 2$ | 17 $77 \div -7 = -11$ | 18 $\frac{-32}{8} = -4$ |

Instructions: Use addition or subtraction to solve each equation.

$$\begin{array}{l} 1 \quad x + 2 = -4 \\ \quad -2 \quad -2 \\ \hline x = -6 \end{array}$$

$$\begin{array}{l} 2 \quad x - 8 = -3 \\ \quad +8 \quad +8 \\ \hline x = 5 \end{array}$$

$$\begin{array}{l} 3 \quad -7 = x - 7 \\ \quad +7 \quad +7 \\ \hline 0 = x \\ x = 0 \end{array}$$

$$\begin{array}{l} 4 \quad -15 = x + 13 \\ \quad -13 \quad -13 \\ \hline -28 = x \\ x = -28 \end{array}$$

$$\begin{array}{l} 5 \quad x - 10 = -1 \\ \quad +10 \quad +10 \\ \hline x = 9 \end{array}$$

$$\begin{array}{l} 6 \quad -1 - x = -8 \\ \quad +x \quad +x \\ \hline -1 = -8 + x \\ \quad +8 \quad +8 \\ \hline 7 = x \quad \text{or} \quad x = 7 \end{array}$$

$$\begin{array}{l} 7 \quad -25 + x = -8 \\ \quad +25 \quad +25 \\ \hline x = 17 \end{array}$$

$$\begin{array}{l} 8 \quad -14 + x = 10 \\ \quad +14 \quad +14 \\ \hline x = 24 \end{array}$$

$$\begin{array}{l} 9 \quad -30 - x = -25 \\ \quad +x \quad +x \\ \hline -30 = -25 + x \\ \quad +25 \quad +25 \\ \hline -5 = x \quad \text{or} \quad x = -5 \end{array}$$

$$\begin{array}{l} 10 \quad x - 20 = -6 \\ \quad +20 \quad +20 \\ \hline x = 14 \end{array}$$

Solving Basic Equations (with Negative Numbers)

Instructions: Use multiplication or division to solve each equation.

$$\begin{array}{l} 1 \quad (\div) \frac{x}{5} = -6 \quad (\cdot) \\ \hline x = -30 \end{array}$$

$$\begin{array}{l} 2 \quad \frac{-3x}{-3} = \frac{-21}{-3} \\ \hline x = 7 \end{array}$$

$$\begin{array}{l} 3 \quad (\cdot) 3 = \frac{-12}{x} \quad (\cdot) \\ \hline \frac{3x}{3} = \frac{-12}{3} \\ \hline x = -4 \end{array}$$

$$\begin{array}{l} 4 \quad (\cdot) \frac{-28}{x} = -4 \quad (\cdot) \\ \hline \frac{-28}{-4} = \frac{-4x}{-4} \\ \hline 7 = x \quad \text{or} \quad x = 7 \end{array}$$

$$\begin{array}{l} 5 \quad (\cdot) \frac{x}{-7} = 9 \quad (\cdot) \\ \hline x = -63 \end{array}$$

$$\begin{array}{l} 6 \quad \frac{15x}{15} = \frac{-45}{15} \\ \hline x = -3 \end{array}$$

$$\begin{array}{l} 7 \quad (\cdot) \frac{x}{-8} = -1 \quad (\cdot) \\ \hline x = 8 \end{array}$$

$$\begin{array}{l} 8 \quad \frac{55}{-5} = \frac{-5x}{-5} \\ \hline -11 = x \\ \text{or} \quad x = -11 \end{array}$$

$$\begin{array}{l} 9 \quad \frac{-72}{-8} = \frac{-8x}{-8} \\ \hline 9 = x \\ \text{or} \quad x = 9 \end{array}$$

$$\begin{array}{l} 10 \quad (\cdot) 9 = \frac{-45}{x} \quad (\cdot) \\ \hline \frac{9x}{9} = \frac{-45}{9} \\ \hline x = -5 \end{array}$$