

Parents/Students,

First of all, welcome to 7th grade! I hope you have a most pleasant, safe, and restful summer filled with lots of fun and adventure.

Next year we will spend the first several weeks reviewing/practicing the below stated set of skills that should have been mastered by the end of 6th grade. In the past we have spent too much time reteaching skills that were taught in 4th-6th grades. I will review these skills at a much faster pace so we will be able to hit the ground running with 7th grade curriculum. However, you will be tested on the skills throughout the year. I will provide extra help next year if needed by providing free morning tutoring, posting instructional videos in Canvas, displaying instructional posters in class for student use, and providing practice with the skills with our morning bell work.

To make sure you are ready for 7th grade; you need to practice these skills this summer to a mastery level. Your IXL account will be active this summer so you may practice using IXL. There are many free instructional math videos online; just search for the specific topic to find free material. You will have a packet of practice problems you can work on this summer for review/practice. If you need help finding extra practice material, email me for help.

Your child's 6th grade teacher will distribute the packet before school ends and you will be able to find the packet on the PCS website under Summer Requirements. If you have any issues obtaining a packet or have questions, please email me: dbielstein@pcsk12.org

Pre-Algebra Skills:

1. Integers (add, subtract, multiply, divide)
2. Order of Operations
3. Change Fraction to Decimal to Percent (vice versa)
4. Order from least to greatest: fractions/decimals/percents
5. Solve Equations (one and two step equations)
6. Fractions (add/subtract with and without common denominators and multiply/divide fractions)
7. Change mixed numbers to improper fractions and change improper fractions to mixed numbers
8. Graph and label points on a coordinate grid
9. Evaluate expressions when given value for variable

Grade-Level 7th Math:

1. Integers (add, subtract, multiply, divide)
2. Order of Operations
3. Change fraction to decimal to percent
4. Change mixed number to improper fraction and improper fraction to mixed number
5. Solve equations: one step equations
6. Fractions: (add and subtract fractions with like and unlike denominators and multiply/divide fractions)
7. Graph and label points on a coordinate grid

Thank you for your time and if I can be of assistance to you this summer, please email me.

Donna Bielstein

dbielstein@pcsk12.org

7th Grade Math/7th Pre-Algebra

Summer Math Review:

Parents and Students:

Below you will find several ways to practice the skills we will review in the beginning of 7th grade math class. We will not spend more than a couple of weeks reviewing the skills, but we will use the skills all year long. I have listed several ways for you to practice these skills this summer.

1. IXL: Your IXL account will be open for use during the summer. Open to IXL and look for Learning in the green bar at top. Click math in the drop down. Go to a grade level and you will see all the skills for that grade level. In the search bar at the top, enter a skill you wish to practice and you will see a list of lessons. Example: enter 'add integers' in the search bar and you will be given lessons that work with that skill. Choose a lesson and practice.
2. Online Help: Go to a search engine and enter information for a skill you need review material. Example: "free video adding fractions without common denominator" Choose some videos and watch/review for help.
3. Math Summer Practice Packet: this is not mandatory but will provide practice with the skills we will review but use all year.

If you feel you need more practice or have questions, please email me and I will be happy to help.

Donna Bielstein

7th Math/7th Pre Algebra

dbielstein@pcsk12.org

* This is not mandatory. However, practice will help!

This chart will be used a great deal next year.

Fraction	Decimal	Percent
<p>To change fraction to decimal: divide top number by bottom number. If using a calculator, enter the top number, the division symbol, the bottom number. Then equal sign.</p> <p>Ex) $\frac{2}{5} = 5 \overline{)2.0}$</p>	<p>To change decimal to a percent: Multiply the decimal number by 100. When you multiply by 100, you move decimal 2 places to the right.</p> <p>0.4 $0.4 \overset{0}{\underset{0}{\cdot}} = 40\%$</p>	<p>40%</p>
<p>$\frac{4}{10} = \frac{2}{5}$</p> <p>Always Simplify</p>	<p>To change a decimal back to a fraction: Say the number</p> <p>0.4 four tenths The 4 is in the 10ths place</p>	<p>To change a percent back to a decimal: Divide by 100. When you divide by 100, move the decimal 2 places left.</p> <p>0.4 40% ↑ understood decimal</p>

Practice Set 1

Name _____

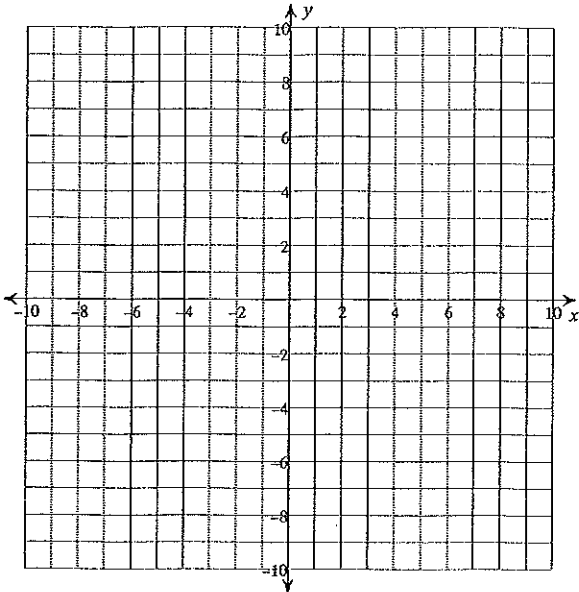
Assignment

Problems 1 to 90

Date _____

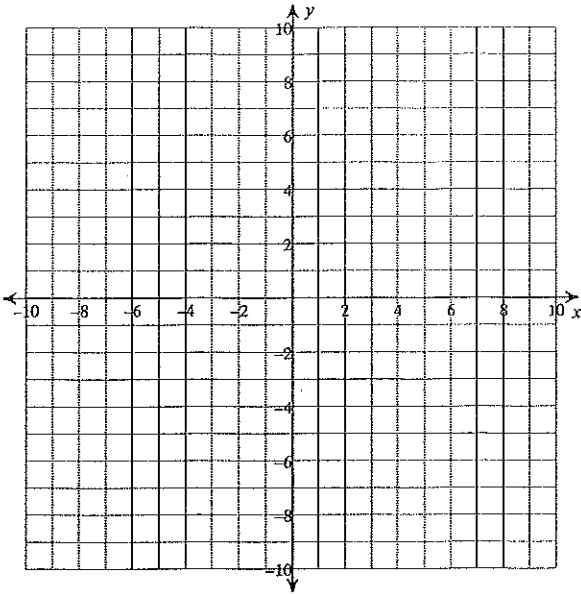
Plot each point. If needed, search online for videos to demonstrate how to plot points on a coordinate grid. You must plot the 'x' coordinate first, you start at the origin and go right or left first. After you go right or left then you will go up or down from that point.

- 1) $E(-7, -7)$ $F(2, -8)$ $G(0, 9)$
 $H(6, -4)$ $I(3, -10)$

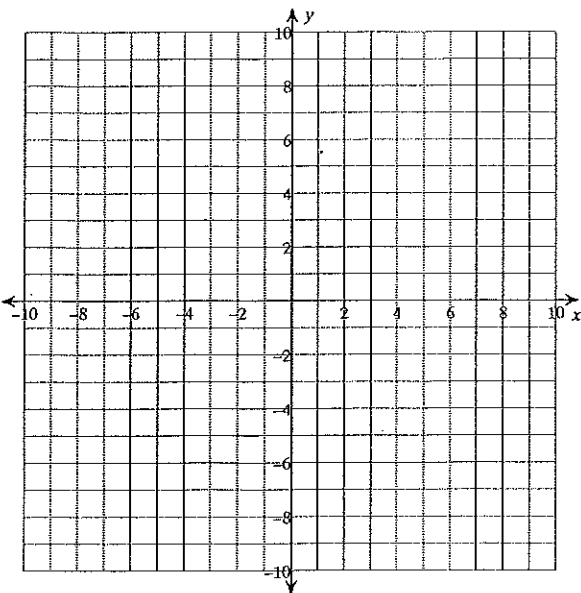


Page 2 Set 1

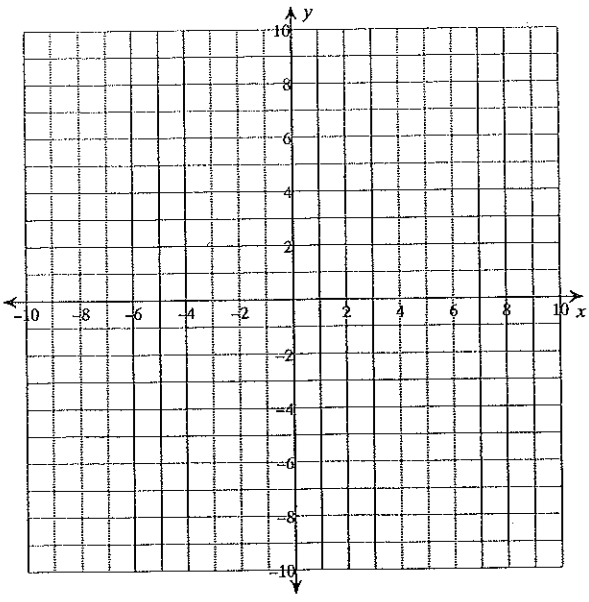
- 2) $F(9, 5)$ $G(10, -6)$ $H(-8, -1)$
 $I(-10, -4)$ $J(-2, -7)$



- 3) $H(7, -5)$ $I(5, -9)$ $J(7, -7)$
 $K(9, 2)$ $L(-4, 10)$

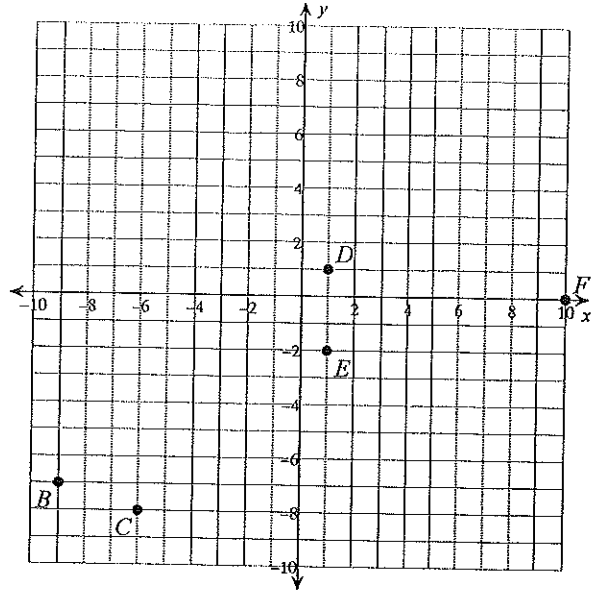


- 4) $I(-9, 1)$ $J(-5, -3)$ $K(-4, 1)$
 $L(0, -10)$ $M(-8, 8)$

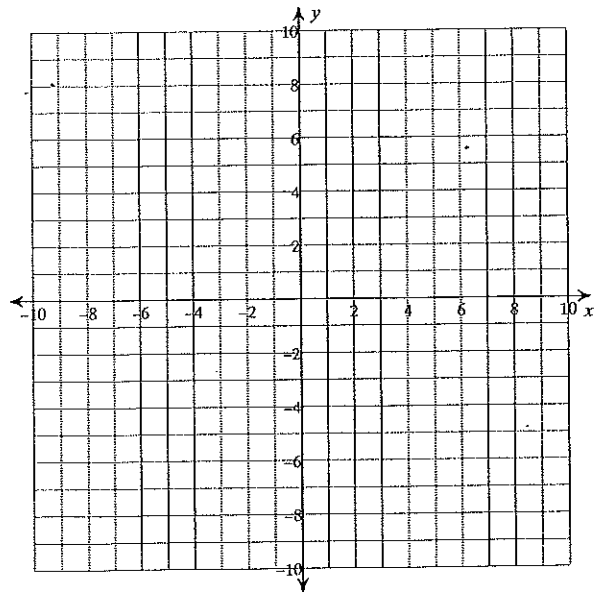


State the coordinates of each point.

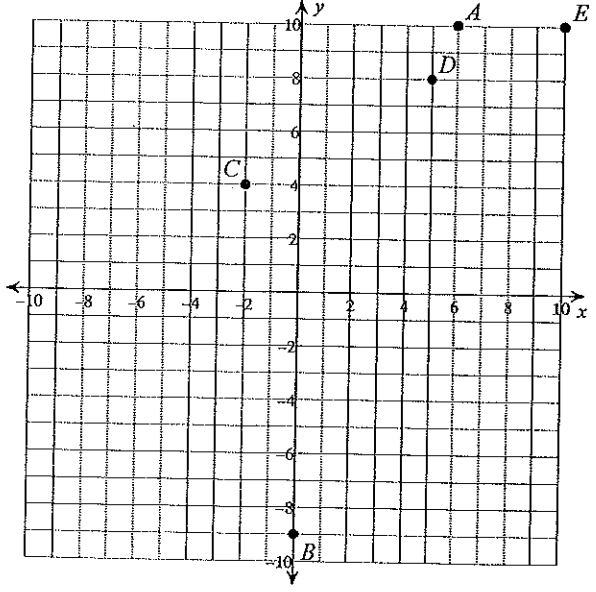
6)



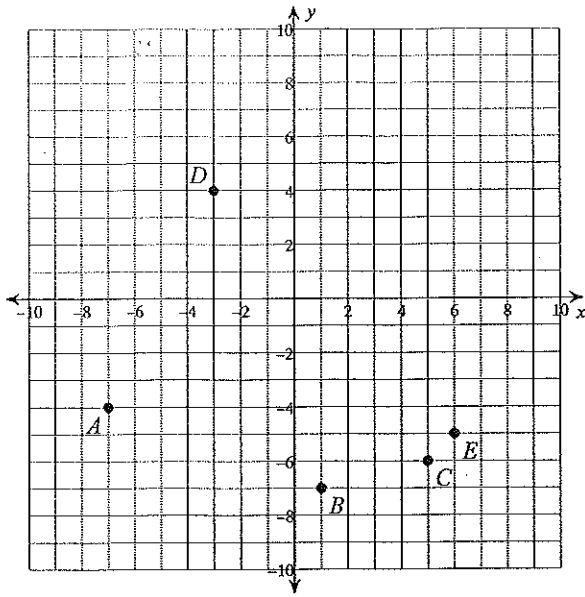
- 5) $H(1, -9)$ $I(1, -5)$ $J(-3, -4)$
 $K(1, 0)$ $L(-10, -8)$



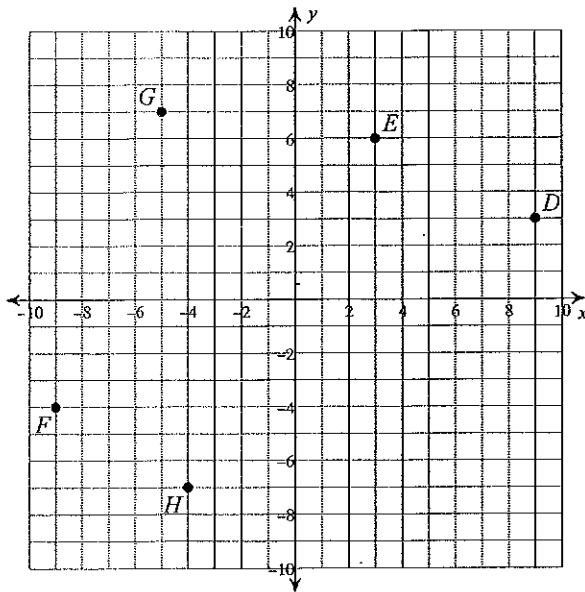
7)



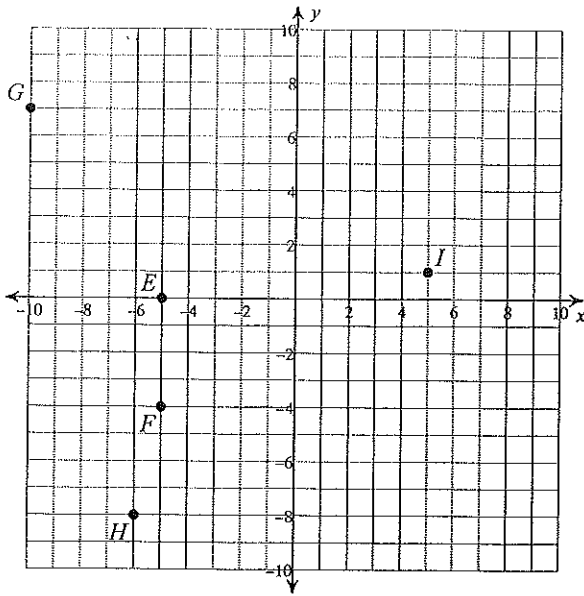
8)



9)



10)



Find each sum. To add or subtract fractions with common denominators you just add or subtract the numerators. **DO NOT ADD OR SUBTRACT THE DENOMINATORS!**

11) $\frac{4}{3} + \frac{1}{3}$

12) $\frac{1}{2} + \frac{3}{2}$

13) $\frac{6}{7} + \frac{3}{7}$

Evaluate each expression. **YOU MUST HAVE COMMON DENOMINATORS TO ADD OR SUBTRACT FRACTIONS.** Once you get common denominators you just add or subtract the numerators. If you need help, search online for videos on how to add or subtract fractions with unlike denominators.

14) $\frac{7}{6} - \frac{1}{4}$

15) $\frac{3}{2} - \frac{2}{3}$

16) $\frac{15}{8} + \frac{5}{4}$

17) $\frac{5}{3} - \frac{3}{4}$

18) $\frac{6}{5} + \frac{1}{4}$

19) $\frac{3}{2} + \frac{7}{6}$

20) $\frac{1}{7} + \frac{7}{4}$

21) $\frac{5}{3} + \frac{2}{5}$

22) $\frac{1}{2} + \frac{2}{7}$

23) $\frac{5}{8} - \frac{1}{4}$

Find each product. To multiply fractions you multiply straight across. Numerator times numerator and denominator times denominator. Always simplify the final answer if needed.

24) $\frac{1}{3} \times \frac{5}{3}$

25) $6 \times \frac{1}{2}$

26) $\frac{4}{3} \times \frac{2}{5}$

27) $\frac{2}{3} \times \frac{3}{2}$

28) $\frac{1}{2} \times \frac{4}{5}$

29) $\frac{9}{5} \times \frac{1}{5}$

30) $1\frac{1}{5} \times \frac{1}{3}$

31) $\frac{1}{5} \times \frac{1}{2}$

32) $2\frac{1}{4} \times \frac{3}{2}$

Find each quotient. To divide fractions, multiply the first fraction times the reciprocal of the second fraction. (Reciprocal: flip the 2nd fraction upside down....numerator becomes denominator and denominator becomes the numerator)

33) $\frac{13}{8} \div \frac{7}{5}$

34) $\frac{5}{4} \div \frac{5}{4}$

35) $2 \div \frac{7}{5}$

36) $\frac{3}{2} \div \frac{17}{9}$

37) $\frac{9}{7} \div \frac{1}{6}$

38) $\frac{7}{8} \div \frac{3}{2}$

39) $\frac{3}{2} \div \frac{1}{6}$

40) $\frac{2}{3} \div \frac{1}{2}$

Page 7 Set 1

$$41) \frac{2}{5} \div \frac{1}{10}$$

$$42) \frac{4}{7} \div \frac{6}{7}$$

Solve each equation. One step equations: Solve to isolate the variable.

1. Focus on the side of the equation that has the variable.

2. Find the positive or negative constant.

3. Do the inverse operation to the positive or negative constant TO BOTH SIDES OF THE EQUATION.

$$43) n - 11 = -4$$

$$44) 13 = \frac{x}{20}$$

$$45) -75 = 5x$$

$$46) k + 12 = -4$$

$$47) v - 9 = -21$$

$$48) 16 = \frac{n}{2}$$

$$49) 20 = 5v$$

$$50) -17a = 204$$

$$51) -15b = 270$$

$$52) \frac{k}{5} = 2$$

THIS SET OF PROBLEMS IS FOR ADVANCED/PRE ALGEBRA: Solve each equation.

Focus on the side of the equation that has the variable. Solve to isolate the variable.

1. Look at the side of the equation with the variable. Find the positive or negative constant.

2. Do the inverse operation to the positive or negative constant TO BOTH SIDES.

3. You will now have a one step equation. Follow steps to solve a one step equation.

$$53) -8r - 3 = 69$$

$$54) -4 + \frac{n}{4} = -6$$

$$55) 3 + 8x = 139$$

$$56) \frac{b}{12} + 3 = 4$$

$$57) 7 + 3n = 16$$

$$58) -3a + 4 = -32$$

$$59) -7 + 5n = -82$$

$$60) -10 + \frac{k}{4} = -12$$

$$61) -5v + 8 = 83$$

$$62) -4 + 3v = 5$$

63) $10 + \frac{n}{5} = 12$

64) $3 - 9n = 174$

65) $-10 + \frac{r}{4} = -15$

66) $4 + \frac{x}{16} = 5$

67) $\frac{a}{10} + 1 = 0$

Evaluate each expression.

Add Integers: Positive + Positive = Positive Negative + Negative = Negative

Positive + Negative = (You can not add a positive to a negative....subtract the two numbers and give the answer the same sign as the bigger number)

SONG: Same sign add and keep, different signs subtract; keep the sign of the larger number and you will be exact. (to the tune of Row, Row, Row Your Boat)

68) $6 - 8$

69) $(-6) - 2$

70) $(-2) - (-8)$

71) $(-2) - 5$

72) $(-8) - (-7)$

73) $6 + (-8)$

74) $(-7) - 1$

75) $4 - (-2)$

76) $8 - (-5)$

77) $(-1) - (-2)$

78) $1 - 1$

79) $(-6) + (-5)$

80) $(-6) + 2$

81) $(-8) - (-6)$

Find each quotient. **MULTIPLY OR DIVIDE INTEGERS:** If the two numbers have the **SAME** sign then the answer will be positive. If the two numbers have **DIFFERENT** signs then the answer will be negative. An **ODD** number of negative signs will be a negative answer.

82) $8 \div 4$

83) $-18 \div -6$

84) $-42 \div 7$

85) $21 \div 3$

86) $-12 \div 2$

Find each product.

87) -9×-10

88) 2×-10

89) -9×-2

90) -6×-8

91) 3×-8

Evaluate each expression. For Grade Level and Pre Algebra

1) $\frac{3}{5} + \frac{7}{5}$

2) $\frac{6}{7} + \frac{9}{7}$

3) $8 + \frac{1}{2}$

4) $\frac{1}{6} + \frac{7}{6}$

5) $\frac{1}{3} + \frac{1}{3}$

6) $\frac{8}{5} + \frac{2}{5}$

Find each product. For Grade Level and Pre Algebra

7) $\frac{3}{2} \times \frac{5}{3}$

8) $\frac{7}{6} \times \frac{5}{3}$

9) $\frac{4}{5} \times \frac{1}{2}$

10) $\frac{3}{5} \times \frac{5}{3}$

11) $\frac{1}{2} \times \frac{5}{3}$

12) $\frac{8}{5} \times \frac{3}{2}$

Find each quotient. For Grade Level and Pre Algebra

13) $\frac{3}{4} \div \frac{4}{3}$

14) $\frac{7}{10} \div 3$

15) $\frac{7}{4} \div \frac{9}{7}$

16) $\frac{5}{8} \div \frac{2}{3}$

17) $\frac{4}{7} \div \frac{3}{2}$

18) $\frac{1}{9} \div \frac{1}{8}$

19) $\frac{7}{5} \div \frac{7}{4}$

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

* Make sure you can change a mixed number to an improper fraction. We use improper fractions more than mixed numbers.

Mixed number:

$2\frac{1}{2}$ ← fractional part
↑
whole number

④ $2\frac{1}{2} = \frac{5}{2}$ Multiply the denominator by the whole number then add that product to the numerator to get the new numerator...
Keep same denominator.

$2\frac{1}{2} = \frac{5}{2}$
⑩ $4\frac{2}{7} = \frac{30}{7}$
⑭ $6\frac{2}{4} = \frac{26}{4} = \frac{13}{2}$
* Always simplify if possible

Evaluate each expression. For Grade Level and Pre Algebra

21) $\frac{3}{2} - \frac{5}{4}$

22) $\frac{1}{4} + \frac{3}{5}$

23) $\frac{3}{2} - \frac{1}{4}$

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

25) $\frac{1}{5} + \frac{1}{2}$

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

27) $\frac{8}{7} + \frac{1}{2}$

28) $\frac{1}{2} + \frac{5}{6}$

Find each sum. For Grade Level and Pre Algebra.

29) $(-6) + 6$

30) $(-3) + 7$

31) $(-5) + (-8)$

32) $1 + (-6)$

33) $(-5) + 6$

34) $7 + (-1)$

35) $(-5) + (-6)$

36) $6 + (-4)$

37) $(-5) + 2$

38) $(-4) + (-6)$

Find each difference. For Grade Level and Pre Algebra.

39) $(-7) - (-7)$

40) $4 - (-4)$

41) $1 - (-8)$

42) $(-6) - (-1)$

43) $8 - (-4)$

44) $2 - (-3)$

45) $(-2) - (-5)$

46) $2 - 6$

47) $2 - (-5)$

48) $(-8) - (-8)$

Find each quotient. For Grade Level and Pre Algebra.

49) $54 \div -6$

50) $-6 \div 2$

51) $42 \div -6$

52) $40 \div -4$

53) $70 \div 7$

54) $\frac{12}{-6}$

55) $\frac{63}{9}$

56) $\frac{60}{-10}$

57) $\frac{-9}{3}$

58) $\frac{-30}{-3}$

59) $\frac{9}{-1}$

60) $\frac{-40}{4}$

Find each product. For Grade Level and Pre Algebra.

61) $(6)(-9)$

62) $(7)(-2)$

63) $(-9)(-7)$

64) $(-4)(-5)$

65) $(-4)(4)$

66) $(-7)(10)$

Evaluate each expression. For Grade Level and Pre Algebra.

67) $12 \div (5 - 3) - 1$

68) $(6 - 3)^2 - 5$

69) $8 \div 4 + 15 \div 5$

70) $5(6 - (6 - 5))$

71) $(5 + 5)(6 - 4)$

72) $3^3 - (3 + 2)$

73) $2^3 + 9 \div 3$

74) $4 - 2 + 4 + 6$

75) $18 \div (6 + 5 - 5)$

76) $(12 \div 3)^2 \times 2$

* Write each as a fraction. For Grade Level and Pre Algebra.

77) 0.63

78) 0.29

79) 0.8

80) 0.2

81) 0.55

82) 0.84

83) 0.41

84) 0.1

* Write each as a decimal. Use repeating decimals when necessary. For Grade Level and Pre Algebra.

85) $\frac{1}{2}$

86) $\frac{7}{8}$

87) $\frac{1}{125}$

88) $\frac{8}{33}$

89) $\frac{2}{3}$

90) $\frac{97}{100}$

91) $\frac{3}{4}$

92) $\frac{5}{8}$

* Write each as a percent. Use repeating decimals when necessary. For Grade Level and Pre Algebra.

93) 0.2

94) 0.01

95) 0.5

96) 0.02

97) 0.75

98) 0.72

99) 0.496

100) 0.55

* Use the chart to solve # 77 to 100! Learn the chart. We will use this chart often. You will have the chart in notes and it will be posted in class.
Chart is on back of cover page

Solve each equation. For Grade Level and Pre Algebra.

** Pre-Algebra should practice 2 step equations.*

101) $-3 = x - 5$

102) $-20 = n - 3$

103) $20 = v + 5$

104) $-16r = -128$

105) $\frac{b}{15} = 14$

106) $n - 1 = -6$

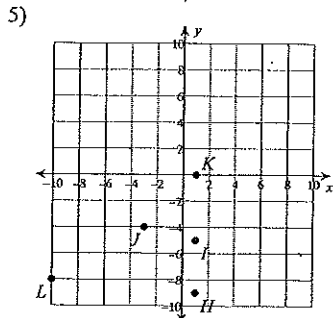
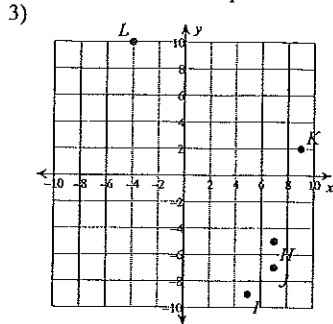
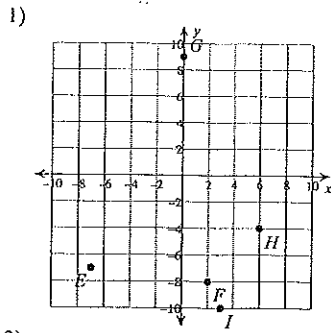
107) $-26 = -7 + a$

108) $2 = n - 1$

2 Step Equations: Pre-Algebra Students

** To find lots of practice problems for 2 step equations, you can search online for free worksheets/2 step equations. I put some on the first section of this packet. (Problems 53 to 67)
Set 1*

Answers to
Set 1
of Practice
Problems
#1 to 90



7) $A(6, 10)$ $B(0, -9)$ $C(-2, 4)$

$D(5, 8)$ $E(10, 10)$

9) $H(-4, -7)$ $G(-5, 7)$ $F(-9, -4)$

$E(3, 6)$ $D(9, 3)$

11) $1\frac{2}{3}$

12) 2

15) $\frac{5}{6}$

16) $3\frac{1}{8}$

19) $2\frac{2}{3}$

20) $1\frac{25}{28}$

23) $\frac{3}{8}$

24) $\frac{5}{9}$

27) 1

28) $\frac{2}{5}$

31) $\frac{1}{10}$

32) $3\frac{3}{8}$

35) $1\frac{3}{7}$

36) $\frac{27}{34}$

39) 9

40) $1\frac{1}{3}$

43) $\{7\}$

44) $\{260\}$

47) $\{-12\}$

48) $\{32\}$

51) $\{-18\}$

52) $\{10\}$

55) $\{17\}$

56) $\{12\}$

59) $\{-15\}$

60) $\{-8\}$

63) $\{10\}$

64) $\{-19\}$

67) $\{-10\}$

68) -2

71) -7

72) -1

75) 6

76) 13

79) -11

80) -4

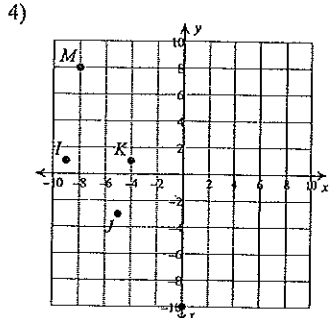
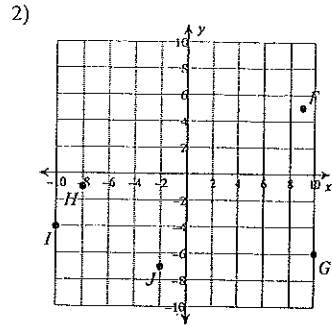
83) 3

84) -6

87) 90

88) -20

91) -24



6) $B(-9, -7)$ $C(-6, -8)$ $D(1, 1)$
 $E(1, -2)$ $F(10, 0)$

8) $A(-7, -4)$ $B(1, -7)$ $C(5, -6)$

$D(-3, 4)$ $E(6, -5)$

10) $E(-5, 0)$ $F(-5, -4)$ $G(-10, 7)$

$H(-6, -8)$ $I(5, 1)$

13) $1\frac{2}{7}$

14) $\frac{11}{12}$

17) $\frac{11}{12}$

18) $1\frac{9}{20}$

21) $2\frac{1}{15}$

22) $\frac{11}{14}$

25) 3

26) $\frac{8}{15}$

-11-

29) $\frac{9}{25}$

30) $\frac{2}{5}$

33) $1\frac{9}{56}$

34) 1

37) $7\frac{5}{7}$

38) $\frac{7}{12}$

41) 4

42) $\frac{2}{3}$

45) $\{-15\}$

46) $\{-16\}$

49) $\{4\}$

50) $\{-12\}$

53) $\{-9\}$

54) $\{-8\}$

57) $\{3\}$

58) $\{12\}$

61) $\{-15\}$

62) $\{3\}$

65) $\{-20\}$

66) $\{16\}$

69) -8

70) 6

73) -2

74) -8

77) 1

78) 0

81) -2

82) 2

85) 7

86) -6

89) 18

90) 48

Answers to
Set 2
of
Practice
Problems
1 to 108

- | | | | |
|----------------------|----------------------|----------------------|---------------------|
| 1) 2 | 2) $2\frac{1}{7}$ | 3) $8\frac{1}{2}$ | 4) $1\frac{1}{3}$ |
| 5) $\frac{2}{3}$ | 6) 2 | 7) $2\frac{1}{2}$ | 8) $1\frac{17}{18}$ |
| 9) $\frac{2}{5}$ | 10) 1 | 11) $\frac{5}{6}$ | 12) $2\frac{2}{5}$ |
| 13) $\frac{9}{16}$ | 14) $\frac{7}{30}$ | 15) $1\frac{13}{36}$ | 16) $\frac{15}{16}$ |
| 17) $\frac{8}{21}$ | 18) $\frac{8}{9}$ | 19) $\frac{4}{5}$ | 20) $1\frac{1}{5}$ |
| 21) $\frac{1}{4}$ | 22) $\frac{17}{20}$ | 23) $1\frac{1}{4}$ | 24) $1\frac{2}{3}$ |
| 25) $\frac{7}{10}$ | 26) $2\frac{3}{4}$ | 27) $1\frac{9}{14}$ | 28) $1\frac{1}{3}$ |
| 29) 0 | 30) 4 | 31) -13 | 32) -5 |
| 33) 1 | 34) 6 | 35) -11 | 36) 2 |
| 37) -3 | 38) -10 | 39) 0 | 40) 8 |
| 41) 9 | 42) -5 | 43) 12 | 44) 5 |
| 45) 3 | 46) -4 | 47) 7 | 48) 0 |
| 49) -9 | 50) -3 | 51) -7 | 52) -10 |
| 53) 10 | 54) -2 | 55) 7 | 56) -6 |
| 57) -3 | 58) 10 | 59) -9 | 60) -10 |
| 61) -54 | 62) -14 | 63) 63 | 64) 20 |
| 65) -16 | 66) -70 | 67) 5 | 68) 4 |
| 69) 5 | 70) 25 | 71) 20 | 72) 22 |
| 73) 11 | 74) 12 | 75) 3 | 76) 32 |
| 77) $\frac{63}{100}$ | 78) $\frac{29}{100}$ | 79) $\frac{4}{5}$ | 80) $\frac{1}{5}$ |
| 81) $\frac{11}{20}$ | 82) $\frac{21}{25}$ | 83) $\frac{41}{100}$ | 84) $\frac{1}{10}$ |
| 85) 0.5 | 86) 0.875 | 87) 0.008 | 88) 0.24 |
| 89) 0.6 | 90) 0.97 | 91) 0.75 | 92) 0.625 |
| 93) 20% | 94) 1% | 95) 50% | 96) 2% |
| 97) 75% | 98) 72% | 99) 49.6% | 100) 55% |
| 101) {2} | 102) {-17} | 103) {15} | 104) {8} |
| 105) {210} | 106) {-5} | 107) {-19} | 108) {3} |

Answers to Skills to practice this summer!