

Algebra 1

Summer Review

Packet

I know, you will probably groan when you see this but it will help set you up for success in Algebra I. You will get a thorough fast paced review of Pre Algebra when you start the term so consider this your warm up lap before the sprint starts.

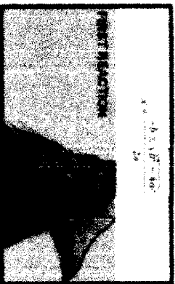
I cannot emphasize enough how important it is to be NEAT when working problems, to be very NEAT when working problems, to be exceedingly NEAT when working problems. Your problems are going to get complicated in a hurry and if you can't discipline yourself to be neat with short simple ones, you certainly won't be able to keep it all organized with bigger problems.

You must get in the habit of showing every step, as if you were explaining this to a 6th grader. Show me every step. If you find an error, a simple cross-out will do, then start on a fresh line. Erasing is never required.

Here are some helpful websites you may find useful if you get stuck on your summer packet:

- www.mathforum.org/library/drmath/drmath.middle.html
- www.purplemath.com
- www.wirtheadherd.com
- www.math.com
- www.freemathhelp.com/algebra-help

Cheers, Mrs. Kowalski



Name Answers

DIRECTIONS: Each of the following problems comes from Pre-Algebra and should help prepare you for Algebra in the fall. Please show ALL work for each problem.

Use order of operations to determine each answer: PEMDAS

1) $(4 \cdot 16) \cdot 8 \cdot (0 + 5)$ 2) $8(3 + 4) - 2 \cdot 8 + (5 - 3)$

$= 64 + 8 - 0$

$= \boxed{72}$

$24 \cdot 32 \cdot (2 \cdot 8 \div 2)$

Mult & division must be done in the order they occur.

$= 24 \cdot 32 - (16 \div 2)$

$= 24 \cdot 32 - 8$

$= \boxed{48}$

3) $(8^2 + (13 - 4)^2) \cdot 5$

$(64 + 9^2) \div 5$

$(64 + 81) \div 5$

$145 \div 5$

$\boxed{29}$

Insert parentheses to make the following equation true:

4) $(8 + (12) \cdot (4 \cdot 5)) \div 1$

$20 \div 20 = 1$

Determine the answer for each problem:

5) $94 - 87 = \boxed{7}$

6) $-51 - 98 = \boxed{-149}$

7) $29 - 100 = \boxed{-71}$

8) $-777 - (-801) = \boxed{24}$

9) $-10 \cdot (-2 \cdot 18) = \boxed{360}$

10) $(4 + -x) = \boxed{x - 4}$

$-10 \cdot (-30) = 300$

$-4 + x$

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11) $-844 + 4 = \boxed{-211}$ 12) $\frac{-183}{-61} = \boxed{3}$ 13) $891 + -9 = \boxed{-99}$

14) $-2(x+3) = \boxed{-2x-6}$ 15) $3(2x-3) + (x-5) = \boxed{7x-14}$
 $-2x-6$ $6x-9+x-5$
 $7x-14$

16) $3(3x+9) = \boxed{2x+6}$
 $\frac{2}{3}(3x+9)$
 $2x+6$

Write in simplest form:
 17) $5\frac{2}{5} + 4\frac{1}{5} = \boxed{9\frac{3}{5}}$

18) $\frac{2}{3} + \frac{5}{8} + \frac{5}{6} = \boxed{\frac{51}{24}}$
 LCD = 24
 $\frac{16}{24} + \frac{15}{24} + \frac{20}{24} = \frac{51}{24}$

19) $9 - 2\frac{1}{3} = \boxed{6\frac{2}{3}}$

20) $10\frac{1}{4} - 3\frac{2}{3} = \boxed{6\frac{1}{12}}$
 LCD = 12
 $10\frac{3}{12} - 3\frac{8}{12}$
 $9\frac{15}{12} - 3\frac{8}{12}$
 $6\frac{7}{12}$

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21) $\frac{1}{2} + \frac{2}{8} + \frac{4}{8} = \boxed{\frac{1}{4}}$
 Simplify then multiply

22) $-\frac{16}{9} + 8 = \boxed{-\frac{2}{9}}$
 $-\frac{16}{9} + 8$
 $= -\frac{16}{9} + \frac{72}{9}$
 $= \frac{56}{9}$

23) $-8 + 4 = \boxed{-\frac{32}{3}}$
 $-8 \times \frac{4}{3} = -\frac{32}{3}$

24) $\frac{7}{10} = \boxed{0.7}$ 25) $\frac{1}{3} = \boxed{0.\bar{3}}$ 26) $8\frac{1}{4} = \boxed{8.25}$

Write as a percent:

27) $\frac{4}{5} = \boxed{80\%}$ 28) $1\frac{2}{5} = \boxed{140\%}$ 29) $3 = \boxed{300\%}$

Write as a decimal:

30) $51\% = \boxed{0.51}$ 31) $102\% = \boxed{1.02}$ 32) $4\% = \boxed{0.04}$

Write as a simple fraction in lowest terms:

33) $125\% = \boxed{\frac{5}{4}}$ 34) $3\% = \boxed{\frac{3}{100}}$ 35) $50\% = \boxed{\frac{1}{2}}$

Write as a percent AND as a simple fraction or mixed number:

36) $25 = \frac{25}{1} = \boxed{25\%}$ 37) $12 = \frac{120}{10} = \boxed{120\%}$ 38) $125 = \frac{125}{1} = \boxed{125\%}$

Solve each equation below and check your answers:

39)

$$x + 22 = 104.8$$

$$\begin{array}{r} -22 \\ \hline x = 82.8 \end{array}$$

40)

$$184 - x = 51$$

$$\begin{array}{r} -184 \\ \hline -x = -133 \\ x = 133 \end{array}$$

41)

$$x - 6 = 30 + 12$$

$$\begin{array}{r} +6 \\ \hline x = 48 \end{array}$$

42)

$$30x = 480$$

$$\begin{array}{r} \div 30 \\ \hline x = 16 \end{array}$$

43)

$$4y - 8 = 20$$

$$\begin{array}{r} +8 \\ \hline 4y = 28 \\ \div 4 \\ \hline y = 7 \end{array}$$

44)

$$17 = \frac{x}{3}$$

$$\begin{array}{r} \times 3 \\ \hline 51 = x \end{array}$$

45)

$$\frac{x}{24} = 12$$

$$\begin{array}{r} \times 24 \\ \hline x = 288 \end{array}$$

For each of the following, write an algebraic equation. Then solve each equation.

46) Eight times a number, increased by 6, is 62. What is the number?

$$8x + 6 = 62$$

$$\begin{array}{r} -6 \\ \hline 8x = 56 \\ \div 8 \\ \hline x = 7 \end{array}$$

47) Number C divided by 0.4 is 10. What is C?

$$\frac{C}{0.4} = 10$$

$$\begin{array}{r} \times 0.4 \\ \hline C = 4 \end{array}$$

48) One half of a number is equal to 14. What is the number?

$$\frac{a}{2} = 14$$

$$\begin{array}{r} \times 2 \\ \hline a = 28 \end{array}$$

For each of the following, write an algebraic equation. Then solve these percent problems.

49) What number is 15% of 60?

$$x = 0.15(60)$$

$$\begin{array}{r} \div 0.15 \\ \hline x = 9 \end{array}$$

50) 66 is 11% of what number?

$$66 = 0.11x$$

$$\begin{array}{r} \div 0.11 \\ \hline 600 = x \end{array}$$

51) 308 is what percent of 350?

$$308 = \frac{308}{350}x$$

52) A \$150 leather jacket is going on sale for a 25% discount. How much will the jacket cost on sale?

$$150(0.25) = 37.50$$

$$150 - 37.50 = 112.50$$

53) Jim bought 3 CD's at a cost of \$14.99 each. What will he pay including 7% sales tax? $1.07[(3)(\$14.99)] = (1.07)(44.97) = \48.12

Evaluate each expression given that:

a) $x = 4$ and b) $x = -3$

54) $2x =$ 8

$x = -3$
-6

55) $x^2 =$ 16

9

56) $x + 6 =$ 10

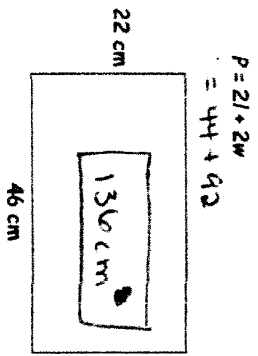
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57) $5x - 3 =$ 17

-18

Basic Geometry and Using Formulas:

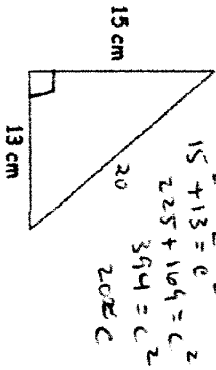
58) Find the perimeter.



$$P = 2l + 2w$$

$$= 44 + 42$$

59) Find the perimeter to the nearest whole number.



$$P = s + s + s \quad a^2 + b^2 = c^2$$

$$15^2 + 13^2 = c^2$$

$$225 + 169 = c^2$$

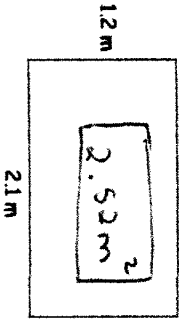
$$394 = c^2$$

$$20 \approx c$$

$$P = 15 + 13 + 20$$

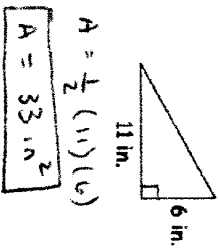
$$P = 48$$

61) Find the area. $A = bh$



$$A = bh$$

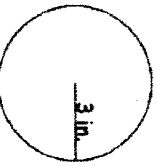
60) Find the area. $A = \frac{1}{2}bh$



$$A = \frac{1}{2} (11)(6)$$

$$A = 33 \text{ in}^2$$

62) Find the circumference to the nearest tenth.

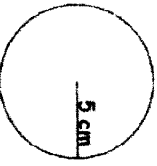


$$C = \pi d \quad \pi = 3.14$$

$$C = (3.14)(6)$$

$$C = 18.84 \text{ in}$$

63) Find the area to the nearest tenth.



$$A = \pi r^2 \quad \pi = 3.14$$

$$A = 3.14 (25)$$

$$A = 78.5 \text{ cm}^2$$

Simplify:

64) $4(x+3) = 4x + 12$

65) $-2(3x-5) = -6x + 10$

66) $2(3b+1) - 5$

$$6b + 2 - 5$$

$$6b - 3$$

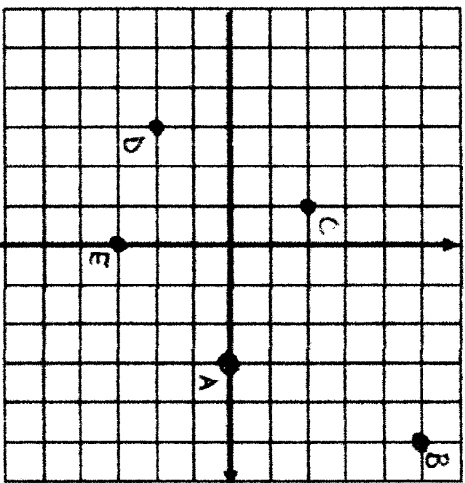
67) $2(x+3) - 5(2x+1)$

$$2x + 6 - 10x - 5$$

$$-8x + 1$$

Plot each of the following points on the grid below. Use the letter to label the point on the graph.

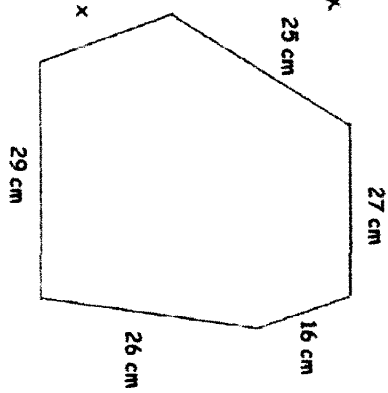
- 68) A(3,0) B(5,5) C(-1,2) D(-3,-2) E(0,3)



69) The perimeter of the figure below is equal to 150 cm. What is the length of the missing side?

$$150 = 25 + 27 + 16 + 26 + 29 + x$$

$$27 = x$$

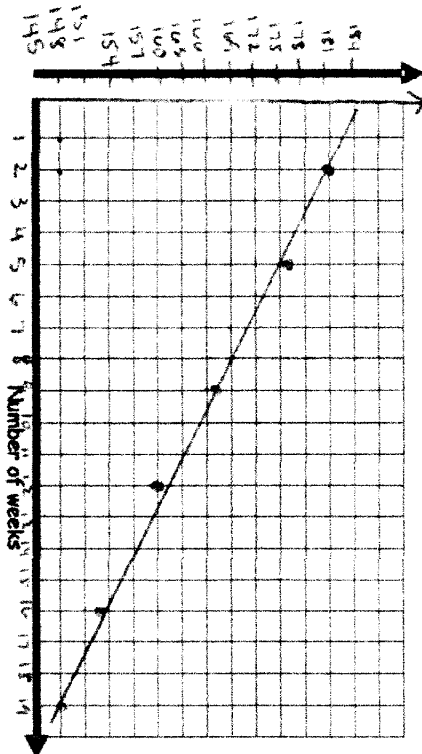


70) Find each decimal equivalent:

- | | | |
|------------------------------------|---|------------------------------------|
| $\frac{1}{8} = 0.125$ | $\frac{1}{6} = 0.1\bar{6}$ | $\frac{1}{10} = 0.1$ |
| $\frac{1}{4} = \frac{2}{8} = 0.25$ | $\frac{1}{3} = \frac{2}{6} = 0.\bar{3}$ | $\frac{1}{5} = \frac{2}{10} = 0.2$ |
| $\frac{3}{8} = 0.375$ | $\frac{3}{6} = 0.5$ | $\frac{3}{10} = 0.3$ |
| $\frac{4}{8} = 0.5$ | $\frac{4}{6} = 0.\bar{6}$ | $\frac{4}{5} = \frac{8}{10} = 0.8$ |
| $\frac{5}{8} = 0.625$ | $\frac{5}{6} = 0.8\bar{3}$ | $\frac{5}{10} = 0.5$ |
| $\frac{6}{8} = 0.75$ | $\frac{6}{6} = 1$ | $\frac{6}{10} = 0.6$ |
| $\frac{7}{8} = 0.875$ | $\frac{7}{6} = 1.1\bar{6}$ | $\frac{7}{10} = 0.7$ |
| | | $\frac{8}{10} = 0.8$ |

71) Taylor is participating in a new fitness program in which he is required to report his weight at the end of each week. The table below shows some of his results.
 • Graph the data from the table on the grid provided. Use a straight edge to sketch the trend.

Number of Weeks in the Fitness Program	Weight (in pounds)
2	181
5	176
9	167
12	160
16	153
19	148



- Explain the relationship between the number of weeks in the Fitness Program and the weight in pounds. Over 17 weeks Taylor lost 33 lbs.
- That is almost 2 lbs per week.
- Using information from the graph and table, predict Taylor's starting weight and weight after 25 weeks in the Fitness Program.

Starting weight = $181 + 4 \text{ lbs} \approx 185 \text{ lbs}$

25 week weight = $148 + 6 \text{ (2 lbs)} = 154 \text{ lbs}$

Problem Set 1 - Place Value and Rounding		No Calculator
Example: 1,234,567,809 1-millions, 2-hundred thousands, 3-ten thousands 4-thousands, 5-hundreds, 6-ten, 7-ones 8-tenths, 0-hundredths, 9-thousandths		Hints/Tips Find your number. Look right next door. 4 or less just ignore. 5 or more, add 1 more. *After rounding, make sure to change all the numbers to the right to zeros!
Write the place value for the underlined digit 3,427,155,323 Answer: Tenth's place		
Round the following number to the given place value 23,561 to the nearest thousand Answer: 24,000		
Write the Place Value of each underlined digit		
1. 6,665,161	2. 8,366,524	3. 5,368,680
Thousands	Hundreds	10 Thousands
4. 5,488,685	5. 7,737,522	6. 9,943,289
ONES	TENS	10 Thousands
7. 13,27489	8. 09489	9. 55,32389
HUNDRETHS	TENTHS	THOUSANDS
Round the following numbers to the given place value.		
10. 7,095 to the nearest hundredth	11. 837,4332 to the nearest whole number	
7.10	837	
12. 9,323,585 to the nearest ten thousand	13. 928,3472 to the nearest thousandth	
9,320,000	928,347	

Problem Set 2 - Comparing and Ordering Numbers		No Calculator
14. 23,561 to the nearest thousand	24,000	15. 34,7921 to the nearest tenth
	34,8	34.8
Examples: 1. $-3 < -1$ 2. $0.7 > 0.2$ 3. $\frac{1}{2} = 0.5$		
Fill in the blank with the correct symbol (>, <, or =)		
16. $7 < \frac{15}{2}$	17. $-8 < -3$	18. $-5 < 1$
19. $9 = \frac{27}{3}$	20. $9 = \frac{12}{4}$	21. $2 > .4$
22. $0.6 > 0.2$	23. $-1.8 < -1.3$	24. $4 = \frac{1}{0.25}$
25. $3 < \frac{15}{4}$	26. $3 < \frac{30}{7}$	27. $-3 > -10$
Order the following sets of numbers from least to greatest		
28. -10, 3, 3.4, -7, 8	-10, -7, 3, 3.4, 8	
29. 0.73, 0.7, 0.45, -0.63, -0.1	-0.63, -0.1, 0.45, 0.7, 0.73	
30. 2.1, 2.6, 2.04, 2	2, 2.04, 2.1, 2.6	
31. -5, -7, 0, -10, -6, 7	-10, -7, -6, 7, -5, 0	
32. 3, 7, -8, -26, -21	-26, -21, -8, 3, 7	

Problem Set - 3 Fraction Computations No Calculator

Examples:		Hint/Tip:
$1 \frac{1}{4} + \frac{2}{3} \rightarrow$	$\frac{3}{12} + \frac{8}{12} = \frac{11}{12}$	If Adding/Subtracting: Find the Common Denominator
$2 \frac{2}{5} - \frac{1}{4} \rightarrow$	$\frac{8}{20} - \frac{5}{20} = \frac{3}{20}$	If Multiplying: Multiply the numerators and denominators
$3 \frac{2}{3} \cdot \frac{7}{8} \rightarrow$	$\frac{14}{24} = \frac{7}{12}$	If Dividing: Multiply the first fraction by the reciprocal of the second fraction (flip the second fraction)
$4 \frac{2}{3} + \frac{1}{2} \rightarrow$	$\frac{5}{2} + \frac{1}{2} = \frac{6}{2} = 3$	*Change mixed numbers into improper fractions first, if necessary
Add the following fractions. Write your final answer in simplest form.		
$33. 1 \frac{1}{3} + \frac{2}{3} =$	$1 \frac{11}{3} = 2 \frac{2}{3}$	
Subtract the following fractions. Write your final answer in simplest form		
$36. 5 \frac{1}{6} - \frac{2}{3} =$	$4 \frac{1}{6} = 4 \frac{1}{6}$	
$37. 2 \frac{1}{2} - \frac{3}{4} =$	$1 \frac{1}{4} = 1 \frac{1}{4}$	
$38. 4 \frac{1}{5} - \frac{2}{10} =$	$3 \frac{1}{10} = 3 \frac{1}{10}$	
Multiply the following fractions. Write your final answer in simplest form		
$39. 2 \frac{1}{3} \cdot \frac{2}{5} =$	$1 \frac{4}{15} = 1 \frac{4}{15}$	
$40. 4 \frac{1}{5} \cdot \frac{2}{3} =$	$5 \frac{8}{15} = 5 \frac{8}{15}$	
Divide the following fractions. Write your final answer in simplest form		
$42. 1 \frac{1}{2} \div \frac{3}{4} =$	$2 \frac{2}{3} = 2 \frac{2}{3}$	
$43. 4 \frac{3}{5} \div \frac{2}{3} =$	$12 \frac{9}{10} = 12 \frac{9}{10}$	
$44. 1 \frac{3}{4} \div \frac{2}{3} =$	$2 \frac{9}{8} = 2 \frac{9}{8}$	

Problem Set - 4 Fractions \leftrightarrow Decimals \leftrightarrow Percents Calculator OK

Examples:		Hint/Tips:
1. Convert $\frac{2}{5}$ to a decimal \rightarrow	$\frac{2}{5} = 0.4$	Decimal \rightarrow Percent: Multiply by 100, or move the decimal two places to the right.
2. Convert 0.3 to a percent \rightarrow	$0.3 = 30\%$	Percent \rightarrow Decimal: Divide by 100, or move the decimal two places to the left.
3. Convert 5% to a fraction \rightarrow	$5\% = \frac{5}{100} = \frac{1}{20}$	*Recall: Percents are always out of 100
Convert the following fractions to decimals. Round to the nearest hundredth (when necessary).		
45. $\frac{4}{5} =$	0.8	47. $\frac{5}{8} =$
Convert the following decimals to fractions. Write your final answer in simplest form		
48. $0.125 =$	$\frac{1}{8}$	49. $0.333 =$
Convert the following decimals to percents.		
51. $0.65 =$	65%	52. $3.96 =$
Convert the following percents to decimals. Round to the nearest hundredth (when necessary)		
54. $8\% =$	0.08	55. $712\% =$
Convert the following fractions to percents. Round to the nearest hundredth (when necessary)		
57. $\frac{2}{5} =$	40%	58. $\frac{3}{4} =$
Convert the following percents to fractions		
60. $20\% =$	$\frac{1}{5}$	61. $8\% =$
		62. $75\% =$

Problem Set 5 - Integer Operations No Calculator			
$8 - 4 = 4$ $8 - (-4) = 8 + 4 = 12$ Examples: $-8 \div 4 = -32$ $-8 \div (-4) = 2$		Hints / Tips Multiplying & Dividing *A negative number multiplied/divided by a negative number makes a positive answer *A negative multiplied/divided by a positive makes a negative answer or vice versa	
63. $9 - 20$	64. $-20 + (-5)$	65. $2 + (-12)$	66. $-4 - (-3)$
-11	4	-10	-1
67. $40 \cdot (-2)$	68. $36 + (-11)$	69. $33 - 33$	70. $(-3) \cdot (-2)$
-20	25	0	6
71. $17 - 14$	72. $-22 - 2$	73. $22 + (-2)$	74. $-25 + 3$
3	-24	-11	-20
75. $-3 - (-3)$	76. $-10 \cdot -10$	77. $\frac{-12}{-4}$	78. $-9 + 9$
0	100	3	0

Problem Set - 6 Order of Operations No Calculator	
$6 \cdot (40 - 11) + 24 \div 8$ $6 \cdot 29 + 24 \div 8$ $174 + 24 \div 8$ $174 + 3$ 177 Example:	Hints/Tips Just remember "PEMDAS", it stands for "Parentheses, Exponents, Multiplication and Division, and Addition and Subtraction." P - Always start with parentheses E - Simplify any exponents MD - Do multiplication & division from left to right AS - Do addition & subtraction from left to right
79. $9 \cdot (7 + 5 - 3)$	80. $(30 \div 6) + (3 - 1)$
31	5 + 2
81. $45 \div 9 + 6 \cdot 5$	82. $5 + (21 + 7)^2$
5 + 30	5 + 3 ²
35	5 + 9
83. $(6 + 26) - 17 + 2^2$	84. $27 \div 3^2 - 7$
32 - 17 + 4	27 ÷ 9 - 7
19	3 - 7
85. $10 + 2 \cdot 3 + 15$	86. $8 - 33 \div (2 - 25) + 48$
5 + 3 + 15	8 - 33 ÷ -23 + 48
15 + 15	10
11	

Problem Set - 7 Simple Probability Calculator OK

Example: A jar contains 7 green, 19 black, and 13 pink marbles. If a marble is drawn at random, what is the probability it is not a pink marble?

$$\text{Probability} = \frac{\# \text{ of favorable possibilities}}{\# \text{ of total possibilities}}$$

Total # of non-pink marbles = $7 + 19 = 26$
 Total # of marbles = $7 + 19 + 13 = 39$

$$\frac{26}{39} = \frac{2}{3}$$

87. A jar contains 20 gray and 23 white marbles. A marble is drawn at random. What is the probability that the marble is white?

white = 23
 total = $20 + 23 = 43$

$$\frac{23}{43}$$

88. You roll a die numbered 1 to 6. What is the probability of rolling a number greater than four?

$24 \Rightarrow 5 + 6 = 2$ possibilities
 total = 6 possibilities

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

89. A jar contains 7 green, 20 black, and 13 pink marbles. If a marble is drawn at random, what is the probability it is not a pink marble?

Not pink = $7 + 20 = 27$
 total = $7 + 20 + 13 = 40$

$$\frac{27}{40}$$

90. A jar contains 20 blue, 14 gray marbles and 6 green. What is the probability of drawing a gray or green marble?

Gray or green = $14 + 6 = 20$
 total = $20 + 14 + 6 = 40$

$$\frac{20}{40} = \frac{1}{2}$$

91. A number is drawn at random from 20 to 29. What is the probability that the number drawn is divisible by 2?

even total: 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 = 5 possible even
 $\frac{5}{10} = \frac{1}{2}$
 = 10 possible total

Problem Set - 8 Mean, Median, Mode and Range Calculator OK

Example: 6, 81, 67, 40, 68, 83, 61, 61, 17, 16, 193, 121, 83

The "mean" is the "average", where you add up all the numbers and then divide by the number of numbers.

$$6 + 81 + 67 + 40 + 68 + 83 + 61 + 61 + 17 + 16 + 193 + 121 + 83 = 69$$

$$13$$

The "median" is the "middle" value in the list of numbers. To find the median, your numbers have to be listed in numerical order, so you may have to rewrite your list first.

$$6, 16, 17, 40, 61, 61, 67, 68, 83, 83, 121, 193$$

The "mode" is the value that occurs most often. If no number is repeated, then there is no mode for the list.

The mode of this list of numbers would be both 61 & 83 since they occur most.

The "range" is just the difference between the largest and smallest values.

$$193 - 6 = 187$$

Find the mean, median, mode & range for each list of numbers

92. 26, 13, 13, 26, 26, 11, 18

11, 13, 13, 18, 26, 26, 26

Mean: 19 Median: 18 Mode: 26 Range: 15

93. 168, 149, 27, 44, 11, 98, 44, 138, 74, 149, 44, 110

11, 27, 44, 44, 44, 74, 98, 110, 138, 149, 149, 168

Mean: 88 Median: 84 Mode: 44 Range: 151

94. 5, 9, 18, 2, 9, 7, 27

2, 5, 7, 9, 9, 18, 27

Mean: 11 Median: 9 Mode: 9 Range: 25

95. 157, 121, 93, 36, 174, 104, 15, 37, 76, 45, 174, 156

15, 36, 37, 45, 76, 93, 104, 121, 150, 157, 174, 174

Mean 99 Median 98.5 Mode 174 Range 159

Problem Set - 9 Simple Problem Solving No Calculator

Example: On the first play of the game, the Bears gained 7 yards on a Forte run. On the second play they lost 3 yards. What was the net gain of the two plays?

$$7 - 3 = 4 \text{ After the two plays the Bears gained 4 yards.}$$

96. On her first quiz Sarah scored an 18. On her second quiz she scored a 15. What was her average of the two quizzes?

$$\frac{18 + 15}{2} = \boxed{16.5}$$

97. On a cold Chicago day the temperature was 5 degrees. Over the next 3 hours it dropped 8 degrees. What was the temperature after three hours?

$$5 - 8 = \boxed{-3}$$

That's why I live here!
BRRRRR.

98. A pet shelter noticed that during one month they adopted twice as many dogs as they did cats. If they adopted 17 cats, how many dogs got adopted?

$$17 \times 2 = \boxed{34}$$

99. During the Homecoming game the Lancers scored 20 points in the first half. In the second half they scored 14 points. What was their total score for the game?

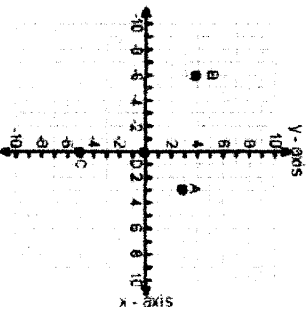
$$20 + 14 = \boxed{34}$$

100. On the third play of the game, the Bears lost 10 yards. On the fourth play they gained 23 yards on a pass to Hester. What was the net gain of the two plays?

$$(-10) + 23 = \boxed{13 \text{ yds}}$$

Problem Set - 10 Graphing on a Coordinate Plane- No Calculator

Example:



Ordered Pair: (x, y) the x-coordinate is left or right movement the y-coordinate is up or down movement

A (3, 2) (3-right, 2-up)

B (-5, 4) (6-left, 4-up)

C = (0, -5) (don't move left or right, 5 down)

D = (0, 0) which is called the Origin

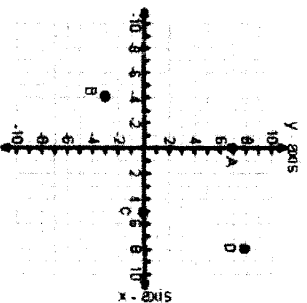
Write the ordered pair for the given point

101. A (0, 7)

102. B (-4, -3)

103. C (5, 0)

104. D (8, 8)



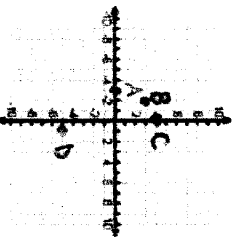
Graph and label the given ordered pairs on the coordinate plane

105. A (-3, 0)

106. B (-2, 3)

107. C (0, 4)

108. D (1, -5)



Problem Set - 11 Combining Like Terms No Calculator

$4x = -2x$	Hint: Add or subtract the coefficients but keep the variable the same.
$-3a + a = 5a$	If there is no number in front of the variable, assume it is a "1"

Simplify

x	110. $-7y + 4y$
x	$-3y$
$7x$	112. $-y - 11y$
	$-12y$
$4x$	114. $9y - 9x + y - 2x$
$-5y$	$-11x + 10y$

Problem Set - 12 Distributive Property No Calculator

$x - 6 = -3x + 18$	Hint: Multiply each term inside the parentheses by the number outside of the parentheses.
$y - 12 = \frac{1}{4}y - 3$	If there is no number in front of the parentheses, assume it is a "1"

-12	116. $-(x+10)$
	$-x - 10$
-3	118. $-3(y-4)$
	$-3y + 12$
-6	120. $5(4x+3)$
$5x + 24$	$20x + 15$