

Summer Assignment for Students Going Into 7th Grade Pre-Algebra

Directions:

- ❑ Complete this packet one topic at a time following the directions below:
 - ❑ Complete all problems in the section, showing all of your work. If there is no work to show, write a sentence or two explaining your answer. **You may not use a calculator on this assignment. Only questions with work and/or explanations will be counted as complete.**
 - ❑ Write your final answer/solution on the chart on the next page.
 - ❑ Check your answers using the answer key on the last page of this packet.
 - ❑ If a question is wrong, that's okay! Check your work for any mistakes and try again :).
 - ❑ If multiple questions are wrong or you don't understand how to arrive at the correct answer, it's probably time to get extra help (see below).
- ❑ If you need extra help you should:
 - ❑ Use Khan Academy as a resource to refresh your understanding of the topics. There are mini-units on Khan Academy with practice problems that might be helpful.
 - ❑ Reach out to a friend that might be able to help explain a concept to you - remember, getting help is ok, but getting answers is not - we want you to understand the material in this assignment as you will be using it moving forward this year and for the years to come!!
- ❑ Bring this packet with you on the first day of school.
 - ❑ While we will be looking at the chart to see trends across the class, your grade will be based on **completion** not correct answers.
 - ❑ Please draw a ☆ next to any topic you would like your teacher to review with you or the whole class.

Name: _____

Solution/Reflection Chart

Topic	Question	My Answer	Correct?	Topics
Simplifying Expressions	1			Combining Like Terms
	2			
Writing Expressions	3			Writing Expressions
	4			
	5			
	6			
Fraction Arithmetic	7			Adding and Subtracting Fractions
	8			Multiplying and Dividing Fractions
	9			
	10			
	11			
	12			
	13			
	14			
	15			
Decimal Arithmetic	16			Adding and Subtracting Decimals
	17			Multiplying and Dividing Decimals
	18			
	19			
	20			
	21			
Converting Between Fractions, Decimals, & Percents	22			Converting Between Fractions, Decimals and Percents
	23			
	24			

Converting Between Fractions, Decimals, & Percents	25			Converting Between Fractions, Decimals and Percents
	26			
	27			
	28			
	29			
	30			
	31			
	32			
	33			
Ratios & Percents	34			Ratio/Percent Problems
	35			
	36			
	37			
Solving One-Step Equations	38			One-Step Equations
	39			
	40			
	41			
	42			
	43			
Positive & Negative Numbers	44			+/- Numbers
	45	Graph		
Coordinate Plane	46	Graph		Coordinate Plane/Ordered Pairs

REMINDER: Please draw a ☆ next to any topic you would like your teacher to review with you or the whole class upon returning to school in the fall

Topic 1: Simplifying Expressions

1. $6 + (5 + x)$

2. $12(x + 3)$

Topic 2: Writing Expressions (Simplify when possible)

Write each phrase as an algebraic expression

3. The sum of 28 and $3x$

4. The difference between $5a$ and b

5. The quotient of x and y

6. The product of $2x$ and $4y$

Topic 3: Fraction Arithmetic (Simplify when possible)

7. $\frac{3}{4} + \frac{1}{8}$

8. $\frac{5}{6} - \frac{1}{5}$

9. $1\frac{2}{5} + \frac{3}{4}$

10. $\frac{7}{9} - \frac{1}{3}$

11. $\frac{5}{13} * \frac{4}{5}$

12. $\frac{11}{12} * 6$

13. $1\frac{4}{5} * 3\frac{2}{3}$

14. $\frac{7}{9} \div \frac{21}{18}$

15. $3\frac{5}{6} \div 1\frac{2}{3}$

Topic 3: Decimal Arithmetic

16. $6.23 + 0.4$

17. $4.18 - 1.53$

18. $(.87)(21)$

19. $2.7 * 9.04$

20. $4.38 \div 12$

21. $\frac{31.75}{5}$

Topic 4: Converting Between Fractions, Decimals, and Percents

Write each decimal as a fraction in simplest form.

22. 0.9

23. 0.64

24. 7.2

Write each fraction as a decimal

25. $\frac{7}{10}$

26. $\frac{3}{25}$

27. $\frac{5}{6}$

Write each fraction as a percent

28. $\frac{2}{25}$

29. $\frac{3}{8}$

Write each percent as a fraction

30. 45%

31. 34%

Write each decimal as a percent

32. 0.52

33. 5.12

Topic 5: Ratios & Percents

Solve the following:

34. Find 75% of 80

35. Write a ratio 2 red crayons to 5 blue crayons

36. Write a *unit rate* for 18 necklaces made in 3 hours
37. A snowmobile is traveling at a speed of 88 ft per second. Determine the number of seconds it takes for the snowmobile to travel 528 ft.

Topic 6: Solving One-Step Equations

Show all inverse operations!

38. $m - 7 = 3$

39. $x + 2 = 9$

40. $a + 5.5 = 17.3$

41. $\frac{x}{10} = 7$

42. $3b = 12$

43. $24 = \frac{2}{3}x$

Topic 7: Positive and Negative Numbers

44. Put the following in order from least to greatest:

-2, 0, -10, 24, -382, $1\frac{1}{2}$

45. Place the following values on a number line:

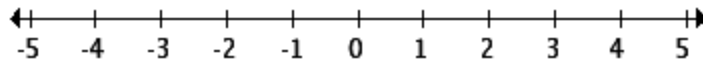
$A = -3$

$B = 2.5$

$C = 0$

$D = -1\frac{1}{3}$

$E = \frac{2}{5}$



Topic 8: Coordinate Plane

46. Plot the following ordered pairs on the coordinate plane below:

$A(0, 3)$

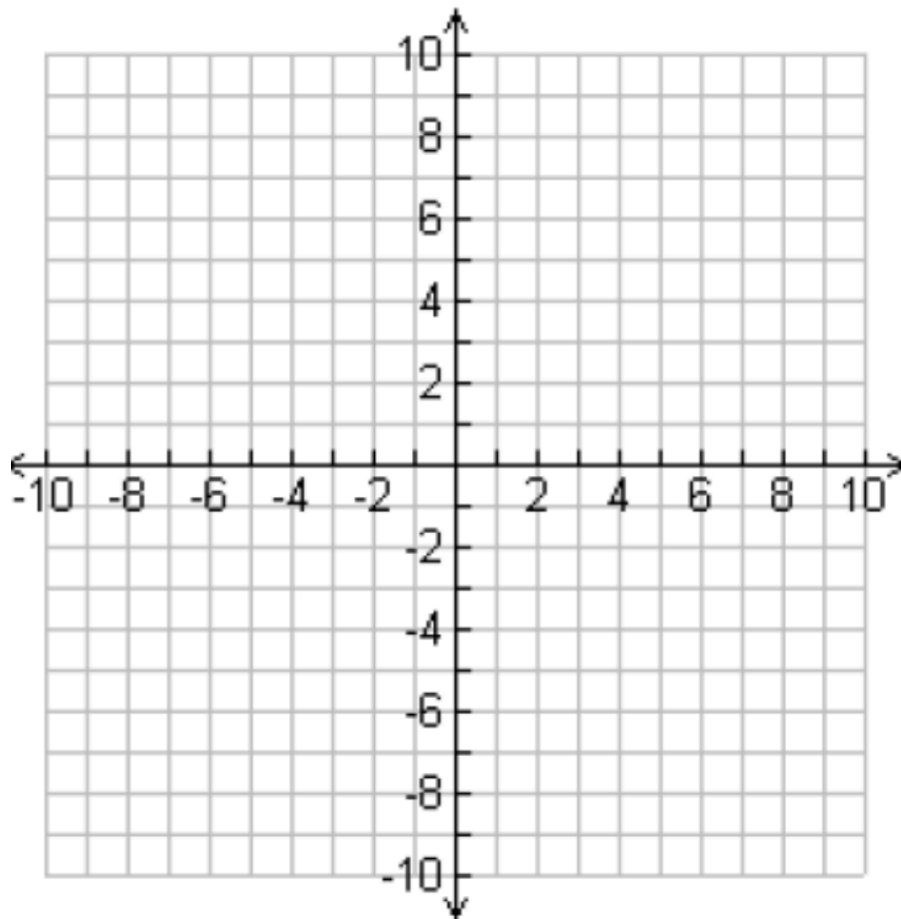
$B(-2, 0)$

$C(-2, 5)$

$D(3, -2)$

$E(5, 7)$

$F(-1, -4)$

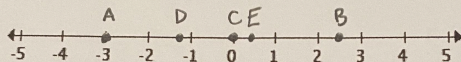


Answer Key:

1. $11 + x$	18. 18.27	35. $\frac{2}{5}$
2. $12x + 36$	19. 24.408	36. 6 necklaces/hr
3. $28 + 3x$	20. 0.365	37. 6 seconds
4. $5a - b$	21. 6.35	38. $m = 10$
5. x/y	22. $\frac{9}{10}$	39. $x = 7$
6. $8xy$	23. $\frac{16}{25}$	40. $a = 11.8$
7. $\frac{7}{8}$	24. $7\frac{1}{5}$ or $\frac{36}{5}$	41. $x = 70$
8. $\frac{19}{30}$	25. 0.7	42. $b = 4$
9. $2\frac{3}{20}$ or $\frac{43}{20}$	26. 0.12	43. $x = 36$
10. $\frac{4}{9}$	27. $0.8\bar{3}$	44. -382, -10, -2, 0, $1\frac{1}{2}$, 24
11. $\frac{4}{13}$	28. 8%	45. <<see graph below>>
12. $5\frac{1}{2}$ or $\frac{11}{2}$	29. 37.5%	46. <<see graph below>>
13. $6\frac{3}{5}$ or $\frac{33}{5}$	30. $\frac{9}{20}$	
14. $\frac{2}{3}$	31. $\frac{17}{50}$	
15. $2\frac{3}{10}$ or $\frac{23}{10}$	32. 52%	
16. 6.63	33. 512%	
17. 2.65	34. 60	

45. Place the following values on a number line:

A = -3 B = 2.5 C = 0 D = $-1\frac{1}{3}$ E = $\frac{2}{5}$



46. Plot the following ordered pairs on the coordinate plane below:

A (0, 3) B (-2, 0) C (-2, 5) D (3, -2) E (5, 7) F (-1, -4)

