CP Algebra 1

Summer Assignment

Name: _____ Period: _

The purpose of this packet is to both convey to students the foundational skills needed to be successful in this course and to provide them an opportunity to self-assess and develop these skills prior to entering the class. In order to be successful in this and all subsequent math courses at Servite, students must master and retain the content and skills from all previous math courses. As such, we ask that you please work on this assignment with integrity and diligence always striving to meet the intended purpose and goal of this assignment.

Directions: Please print this packet. You **must show all work** in this packet in the space provided. You **may not** use a calculator. For every word problem, write your answer in the form of a sentence. After you make an honest attempt at a problem, check your answer. If your answer is incorrect, try to identify where you went wrong, review the topic, and redo the problem correctly.

This packet will be **collected** on the **second day** of school. You will be given a homework grade for completing this packet. Per Servite School policy, if this packet is not turned in on the second day of school, you will receive half credit if it is turned in the following day. After that, you will receive a zero for this packet. An assessment will be given at the beginning of the school year to make sure you have mastered all prerequisites. This assessment will count as a quiz grade.

Have a great summer and we are looking forward to seeing you in August!

I understand that I have to show all my work and cannot use a calculator.

_____ _____

(Student Signature) **(Date)**

I have checked to see that my child have shown all work and completed all problems without the use of a calculator.

_____ _____

(Parent/Guardian Signature) **(Date)**

Name _____ Date _____

Skills Test

Prerequisite Skills Test

Add or subtract.

1. $-9 + (-15)$ **2.** $2 + (-3)$ **3.** $6 - 9$

4. $-6 - 11$ **5.** $13 + 8$ **6.** $-12 - (-10)$

Multiply or divide.

7. $2(-7)$ **8.** $-8 \bullet 2$ **9.** $9 \div 3$

10. $25 \div (-5)$ **11.** $-30 \div (-6)$ **12.** $-1(-7)$

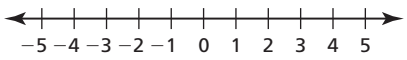
Solve the problem and specify the units of measure.

13. The length of a rectangle is 6 feet and the width is 3 feet. Find the perimeter of the rectangle.

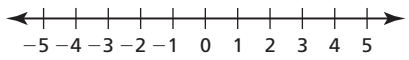
14. One side of a square measures 9 centimeters. Find the area of the square.

Graph the number.

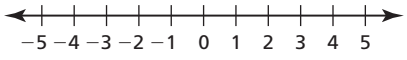
15. 4



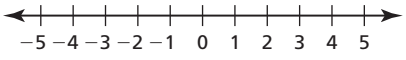
16. $|-3|$



17. $-6 + |5|$



18. $1 - |-3|$



Complete the statement with <, >, or =.

19. 3____7 **20.** -1____4

21. -4____-10 **22.** $|-6|$ ____-3

Evaluate the expression for the given value of *x*.

23. $2x - 6;\ x = 9$ **24.** $-7 + 9x;\ x = 3$ **25.** $12x + 13;\ x = 5$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. See left.
16. See left.
17. See left.
18. See left.
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____

Name_____ Date _____

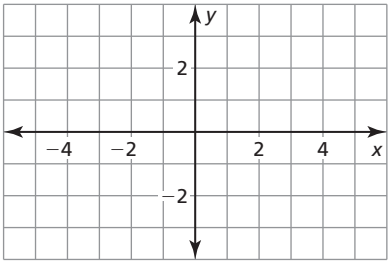
Skills Test

Prerequisite Skills Test (continued)

Evaluate the expression for the given value of *x*.

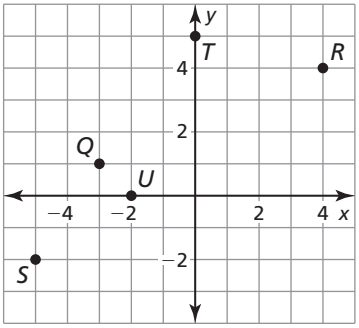
26. $-x - 12;\ x = 4$ **27.** $13 - 7x;\ x = -10$ **28.** $11x + 17;\ x = -6$

Plot the point in the coordinate plane. Describe the location of the point.



29. $A(4, 2)$ **30.** $B(-1, 3)$ **31.** $C(-5, -3)$ **32.** $D(3, 0)$

Use the graph to answer the question.



33. Which ordered pair corresponds to point U?

34. Which ordered pair corresponds to point S?

35. Which point is located in Quadrant II?

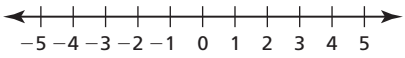
Solve the equation for *y*.

36. $2x - y = 3$ **37.** $3x + 2y = -4$ **38.** $-2x = 6y + 3$

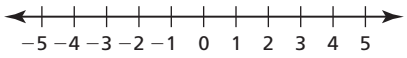
39. $0 = 7x - y + 12$ **40.** $-2y + x = 4y - 6$

Solve the inequality. Graph the solution.

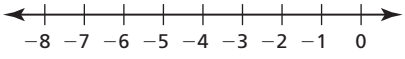
41. $p + 6 > 9$



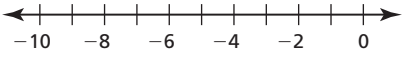
42. $3x - 4 < 2$



43. $-4m + 6 \leq 22$



44. $5x + 1 \leq 3x - 9$



Answers

26. _____
27. _____
28. _____
29. _____
30. _____
31. _____
32. _____
33. _____
34. _____
35. _____
36. _____
37. _____
38. _____
39. _____
40. _____
41. _____
See left.
42. _____
See left.
43. _____
See left.
44. _____
See left.

Name _____ Date _____

Skills Test

Prerequisite Skills Test (continued)

Answers

Evaluate the expression.

48. $14 \div 7 - 2^2 + (-3) \bullet 2 - 1$

49. $-4 - (3 + 6^2) \div 13 - 1^2 \bullet (-12)$

Find the square root(s).

50. $\sqrt{25}$

51. $-\sqrt{81}$

52. $\pm\sqrt{9}$

53. $-\sqrt{144}$

Write an equation for the *n*th term of the arithmetic sequence.

54. 3, 6, 9, 12, …

55. 7, 0, −7, −14, …

56. 2, 13, 24, 35, …

Simplify the expression.

57. $7x - 1 + 2x$

58. $3m + 2 - 6m + 8 - 1$

59. $-4(2y - 1) + 3y - 7$

60. $3(d + 3) - (2d - 1) + 11d + 8$

Evaluate the expression when $x = -3$.

61. $3x^2 - 6$

62. $2x^2 - 6x + 1$

63. $-x^2 - 5x - 1$

64. $x^2 + 3x + 8$

65. $-2x^2 + 4x + 3$

66. $-3x^2 - 6 - x$

48. _____

49. _____

50. _____

51. _____

52. _____

53. _____

54. _____

55. _____

56. _____

57. _____

58. _____

59. _____

60. _____

61. _____

62. _____

63. _____

64. _____

65. _____

66. _____

Name_____ Date _____

Skills Test

Prerequisite Skills Test (continued)

Find the greatest common factor.

Answers

70. 45, 9

71. 64, 48

72. 25, 10

73. 29, 12

70. _____

71. _____

72. _____

73. _____

Evaluate the expression.

80. $3\sqrt{9} - 6$

81. $\frac{\sqrt{25}}{15} - 7$

82. $2\left(\frac{\sqrt{16}}{8} + 6\right)$

83. $-3\left(9 - \sqrt{100}\right)$

80. _____

81. _____

82. _____

83. _____

Skills Test

Prerequisite Skills Test Item Analysis

Item Number	Skills
1	adding and subtracting integers
2	adding and subtracting integers
3	adding and subtracting integers
4	adding and subtracting integers
5	adding and subtracting integers
6	adding and subtracting integers
7	multiplying and dividing integers
8	multiplying and dividing integers
9	multiplying and dividing integers
10	multiplying and dividing integers
11	multiplying and dividing integers
12	multiplying and dividing integers
13	specifying units of measure
14	specifying units of measure
15	graphing numbers on a number line
16	graphing numbers on a number line
17	graphing numbers on a number line
18	graphing numbers on a number line
19	comparing real numbers
20	comparing real numbers
21	comparing real numbers
22	comparing real numbers

Item Number	Skills
23	evaluating expressions
24	evaluating expressions
25	evaluating expressions
26	evaluating expressions
27	evaluating expressions
28	evaluating expressions
29	plotting points
30	plotting points
31	plotting points
32	plotting points
33	using a graph
34	using a graph
35	using a graph
36	rewriting equations
37	rewriting equations
38	rewriting equations
39	rewriting equations
40	rewriting equations
41	solving/graphing inequalities
42	solving/graphing inequalities
43	solving/graphing inequalities
44	solving/graphing inequalities

Skills Test

Prerequisite Skills Test Item Analysis (continued)

Item Number	Skills
45	graphing linear functions
46	graphing linear functions
47	graphing linear functions
48	using order of operations
49	using order of operations
50	finding square roots
51	finding square roots
52	finding square roots
53	finding square roots
54	writing equations for arithmetic sequences
55	writing equations for arithmetic sequences
56	writing equations for arithmetic sequences
57	simplifying algebraic expressions
58	simplifying algebraic expressions
59	simplifying algebraic expressions
60	simplifying algebraic expressions
61	evaluating expressions
62	evaluating expressions
63	evaluating expressions
64	evaluating expressions
65	evaluating expressions

Item Number	Skills
66	evaluating expressions
67	solving systems of linear equations by graphing
68	solving systems of linear equations by graphing
69	solving systems of linear equations by graphing
70	finding the greatest common factor
71	finding the greatest common factor
72	finding the greatest common factor
73	finding the greatest common factor
74	factoring perfect square trinomials
75	factoring perfect square trinomials
76	factoring perfect square trinomials
77	factoring perfect square trinomials
78	factoring perfect square trinomials
79	factoring perfect square trinomials
80	evaluating expressions involving square roots
81	evaluating expressions involving square roots
82	evaluating expressions involving square roots
83	evaluating expressions involving square roots
84	transforming linear functions
85	transforming linear functions
86	displaying data