CP Geometry



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.

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)**

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Solve each equation. Check your answer.

1. $-x - 3 + 7 = 3x$

2. $-(x-4) = 2x + 6$

3. $\frac{x+10}{10} = \frac{18}{12}$

4. $r - 2s = 14$ for s

5. $P = 2(L+w)$ for L

6. $S = \frac{n}{2}(a+x)$ for a

Solve each system of equations by any method. Check your answer.

7. $2x + y = 4$
   $3x + y = 3$

8. $x + y = 12$
   $2x + 5y = 27$

9. $y = 3x + 2$
   $y = -2x - 3$

10. $3x - 2y = -6$
    $\frac{1}{3}x + 3y = 9$

11. $x = y-7$
$-y - 2x = 8$

12. $y = -\frac{1}{3}x + 5$
$2x - 2y = -2$

Solve each quadratic equation. Check your answer.

13. $-x^2 = 4x + 4$

14. $-3x^2 = 18x + 27$

15. $6x^2 + 11x = 10$

16. $75x - 45 = -30x^2$

17. $x^3 + 2x^2 + x = 0$

18. $81x^2 + 17 = 81$

Factor completely.

19. $x^2 + 4x + 3$

20. $p^2 - 16$

21. $x^2 + 6x + 8$

22. $x^2 + x - 12$

23. $b^4 - 16$

24. $y^2 + 18y + 81$

Multiply.

25. $(2x + 6)(4x + 5)$

26. $(5x – 8)(4x – 1)$

27. $(2x – 5)^2$

28. $(3a – b)^2$

29. $(3x^2 + 7)(3x^2 – 7)$

30. $(4x^2 - 4)(2x^2 + 3)$

Simplify each expression. All variables represent nonnegative numbers. (the entire expression is inside the square root sign)

31. $\sqrt{25x^8}$

32. $\sqrt{1000}$

33. $(x^3)(x^2)$

34. $x^4 \div x^2$

35. $(2y^5)^2$

36. $\sqrt{27x^4y^3}$

37. $4m^0$

38. 3^{-4}

39. $(2x^2)^{-3}$

40. $2(3y^2)^0$

41. $(\sqrt{2})^2$

42. -9^{-2}

Answers

1. X=1
2. X=-2/3
3. X=5
4. S=(r-14)/2
5. L=(P/2)-2
6. a=(2s/n)-x
7. (-1,6)
8. (11,1)
9. (-1,-1)
10. (0,3)
11. (-5,2)
12. (3,4)
13. X=-2
14. X=-3
15. X=-5/2 or 2/3
16. X=1/2 or -3
17. X=0 or -1
18. X=8/9 or -8/9
19. (x+3)(x+1)
20. (p+4)(p-4)
21. (x+4)(x+2)
22. (x+4)(x-3)
23. $(b^2+4)(b+2)(b-2)$
24. $(y+9)^2$
25. $8x^2 + 34x +30$
26. $20x^2 -37x +8$
27. $4x^2 - 20x + 25$
28. $9a^2 - 6ab + b^2$
29. $9x^4 - 49$
30. $8x^4 + 4x – 12$
31. $5x^4$
32. $10\sqrt{10}$
33. X^5
34. X^2
35. $4y^{10}$
36. $3x^2y\sqrt{3y}$
37. 4
38. 1/81
39. $1/8x^6$
40. 2
41. 2
42. -1/81