

Name: _____

ID: A

Students Going into Geometry

Summer Review

Short Answer

1. Solve $-10 + x = 39$.

2. Solve $\frac{s}{2} = 48$.

3. Solve $2s = 36$.

4. Solve $\frac{2}{10}z = 75$.

5. If $7x = 42$, find the value of $43 - 8x$.

6. If $3x = 24$, find the value of $25 - 4x$.

7. Solve $32 = 14 - 2a$.

8. Solve $\frac{h}{90} - \frac{3}{9} = \frac{1}{9}$.

9. Solve $44c + 4 - 17c = 31$.

10. Solve $20b + 14 - 9b = 25$.

11. Solve $27b + 6 - 13b = 34$.

12. If $7z - 1 = 20$, find the value of $2z$.

13. Solve $46s - 5 = 51s - 90$.

14. Solve $46t - 5 = 88t - 89$.

15. Solve $47r - 24 = 60r - 63$.

16. Solve $2y - 7 + 2y = -8 - 3y$.

17. Solve $2b + 4 - 4b = 8 + 3b$.

18. Solve $c - 6 + 4c = -3 + 4c$.

19. Solve $-3y - 8 - 4y = 1 - 7y - 9$. Tell whether the equation has infinitely many solutions or no solutions.

20. Solve $5x - 7 + x = 2 + 6x + 1$. Tell whether the equation has infinitely many solutions or no solutions.

21. Solve $4x - z = y$ for x .

22. Solve $3.8y + \frac{1}{7}x + 2 = 0$ for y .

23. Solve $8|x + 9| = 48$.

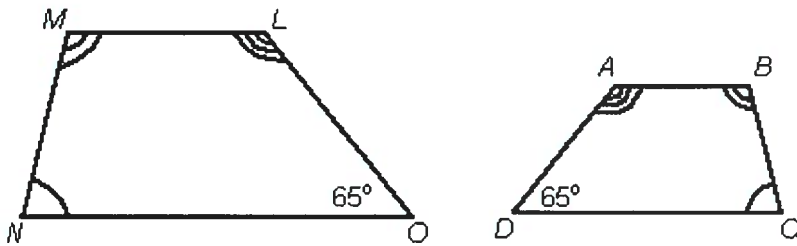
24. Solve $|5x - 8| + 6 = 2$.

25. Solve the proportion $\frac{3}{8} = \frac{x}{40}$.

26. Solve the proportion $\frac{3}{8} = \frac{x}{16}$.

27. Solve the proportion $\frac{5}{6} = \frac{x}{42}$.

28. Find the value of MN if $AB = 18$ cm, $BC = 14.4$ cm, and $LM = 24$ cm.
 $ABCD \sim LMNO$



29. On a sunny day, a 5-foot red kangaroo casts a shadow that is 7 feet long. The shadow of a nearby eucalyptus tree is 35 feet long. Write and solve a proportion to find the height of the tree.
30. A right triangle has legs 15 inches and 12 inches. Every dimension is multiplied by $\frac{1}{3}$ to form a new right triangle with legs 5 inches and 4 inches. How is the ratio of the areas related to the ratio of corresponding sides?
31. Triangles C and D are similar. The area of triangle C is 47.6 in^2 . The base of triangle D is 6.72 in. Each dimension of D is $\frac{6}{5}$ the corresponding dimension of C . What is the height of D ?

32. Graph the inequality $c < 3.8$.

33. Solve the inequality $m - 3 \leq -0.5$ and graph the solutions.

34. Solve the inequality and graph the solution.

$$x + 7\frac{2}{4} \leq 2\frac{4}{8}$$

35. Solve the inequality $\frac{n}{5} < 2$ and graph the solutions.

36. Solve the inequality $2n \geq 14$ and graph the solutions.

37. Solve the inequality $\frac{z}{-4} \leq 2$ and graph the solutions.

38. Solve the inequality $4x \leq -4$ and graph the solutions.

39. Solve the inequality $x - 5 < 1$ and graph the solutions.

40. Solve the inequality $2a + 3 + a \leq -6$ and graph the solutions.
41. Solve the inequality $3x < x + 16$ and graph the solutions.
42. Solve the inequality and graph the solution.
 $-3x + 2.5x \leq 1.5(x + 4)$
43. Solve the inequality $-7(y - 7) > -7y + 7$.
44. Solve $3.25 - 1.25x > -1.25 - 0.75x$.
45. Solve the compound inequality $1 < 3x - 2 \leq 10$ and graph the solutions.
46. Solve and graph the compound inequality.
 $s - 4 > 4$ OR $4 + s \leq 6.5$
47. Which of the following is a solution of $x - 4 < -3$ AND $x + 8 \geq -9$?

48. Solve the inequality $|x + 4| - 7 < -3$ and graph the solutions. Then write the solutions as a compound inequality.
49. Solve and graph the solutions of $|x - 6| - 3 > 12$. Write the solutions as a compound inequality.
50. Solve the inequality.
 $|x - 16| + 5 > 2$
51. Factor the polynomial $15x^3 + 30x^2 - 6x$.
52. Factor $5(t - 8) - 3t(t - 8)$.
53. Factor $15x^3 - 6x^2 - 25x + 10$ by grouping.
54. Factor $4x^3 - 16x^2 + 12 - 3x$.
55. Factor $x^2 + 81x + 80$
56. Factor the trinomial $m^2 + 9m + 18$.

57. Factor the trinomial $r^2 - 6r - 40$.

58. Factor the trinomial $x^4 + 32x^2 + 256$.

59. Factor the trinomial $x^4 + 2x^2 + 1$.

60. Factor the trinomial $x^4 + 8x^2 + 16$.

61. Factor $3x^2 - 14x - 5$

62. Factor $5x^2 + 16x + 3$

63. Factor $5x^2 - x - 4$

64. Factor $5x^2 + 27x + 10$.

65. Factor $3x^2 - 17x + 10$.

66. Factor $5x^2 - 27x + 10$.

67. Factor $90x^2 + 7x - 6$.

68. Factor $40x^2 - 33x - 18$.

69. Factor $5y^2 - 28y - 12$.

70. Factor $-3x^2 + 26x - 16$.

71. Factor $27x^2z + 36xz + 12z$ completely.

72. Factor the polynomial $30x^3 + 28x^2 + 6x$ completely.

73. Factor the polynomial $20x^3 + 34x^2 + 6x$ completely.

74. Factor the polynomial $12x^3 + 22x^2 + 6x$ completely.

75. Factor the polynomial $30x^3 + 22x^2 + 4x$ completely.

