From Alg 1A going into Alg 1B Summer Worksheet 1 (ALL without a calculator) rev 6/13/17

Simplify. Leave all answers as Improper Fractions. All work must be shown.

1. $13 - \frac{9}{4}$
2. $7\frac{1}{2} - 6\frac{2}{3}$
3. $\frac{1}{5} + \frac{1}{3}$
4. $\frac{3}{4} + \frac{1}{3}$
5. $\frac{3}{5}(9)$
6. $\frac{2}{3}\left(\frac{5}{7}\right)$
7. $\frac{1}{5} \div \frac{9}{28}$
8. $\frac{8+12}{4} + 8 + \frac{12}{5}$
9. If 4 times a number is 156, then $\frac{1}{3}$ of the number is _____.

Solve for the variable.

10. $x + 13 = -9$
11. $y - 10 = -19$
12. $13n = -48$
13. $\frac{y}{7} = -8$
14. $3x - 8 = 13$
15. $8m = m - 14$
16. $3 + 5(4x + 6) = 2x - 3$
17. $3(7 + 2n) = 30 + 7(n - 1)$
18. 60 is what percent of 150?
19. 75% of what number is 187.5?
20. $\frac{x}{4} \leq -3$
21. $-7y < 35$
22. $7 - 6n < 2n + 87$
23. Kim is 3 years older than John. The sum of their ages is less than 16. What is the oldest John could be?

Simplify (with no negative exponents).

24. $7^2(7^4)$
25. $(5^3)^4$
26. $\frac{x^9y^3}{x^2y^7}$
27. $\left(\frac{4p^2}{3p}\right)^3$
28. $4x^0y^{-5}$
29. $\frac{7x^4y^6}{-27x^2y^9}$
30. $(5x^2 - 4x + 1) - (3x^2 + 7)$
31. $3x^2(5x^3 - 4x^2 + 9x)$

Multiply.

32. $(2x + 5)(2x - 5)$
33. $(4y + 7)^2$
34. $(x - 9)(2x + 3)$

Factor.

35. $14y^4 - 8y^3 + 6y^2$

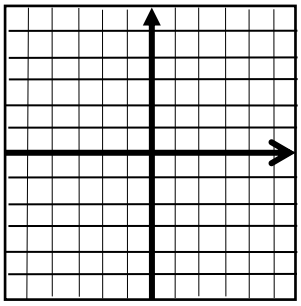
36. $x^2 - 36$

37. $4x^2 - 20x + 25$

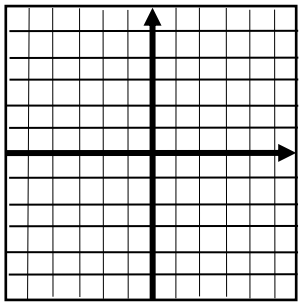
38. $x^2 + 8x + 15$

Graph.

39. $y = \frac{2}{3}x - 2$



40. $x + 2y = 16$



Solve by Substitution.

41. $x - 3y = -4$
$2x - y = 7$

Solve by Elimination.

42. $3x + 6y = -6$
$5x - 2y = 14$

From Alg 1A going into Alg 1B Summer Worksheet 2 (ALL without a calculator) rev 6/13/17

Simplify. Leave all answers as Improper Fractions. All work must be shown.

1. $21 + \frac{8}{3}$ 2. $9\frac{2}{3} + 7\frac{1}{4}$ 3. $\frac{3}{4} - \frac{2}{7} + \frac{5}{6}$ 4. $\frac{4}{7} - 8$

5. $\frac{2}{9}(13)$ 6. $\frac{3}{8}\left(\frac{4}{7}\right)$ 7. $\frac{2}{5} \div \frac{9}{15}$ 8. $\frac{6-5}{3} - 11 + \frac{7}{2}$

9. If a third of a number is 14, then 2 times the number is _____.

Solve for the variable.

10. $2x - 11 = 29$ 11. $8 - 3n = 35$ 12. $\frac{4}{5} + \frac{1x}{3} = \frac{1}{6}$

13. $\frac{3}{4}y = 24$ 14. $4(3n + 2) = 44$ 15. $3x - 6 - 7x = 12 - 2x + 6$

16. 96 is what percent of 150? 17. 45 is 90% of what number?

18. $5(12 - 3n) \geq 15(n + 4)$ 19. $17 - 6y < -13$ 20. $\frac{2}{5} - \frac{x}{3} \leq \frac{2}{9}$

21. Your quiz grades are 73, 75, 89, and 91. What is the lowest grade you can obtain on the last quiz and still achieve an average of at least 85?

Simplify (with no negative exponents).

22. $9^5(9^4x^3)^2$ 23. $(3x^4y^7n^6)^5$ 24. $\left(\frac{-2x^2y^6}{5}\right)^4$

25. $(5n^3 - 3n^2 - 6n) - (-2n^2 + 7n)$ 26. $6y^3(4y^4 - 5y^3 + 9y^2)$

Multiply.

27. $(6x - 5)(3x + 8)$ 28. $(9x - 7)(9x + 7)$ 29. $(8n - 3)^2$

Graph.

30. $-4x - 5y = 10$

Solve by Graphing.

31. $3x - y = 6$
$-2x - y = 1$

32. $x = 4$
$x - y = 3$