Algebra I Part II 67A Name_____

Solve the system by the elimination method:

1. $4x + 4y = -8$
   $3x - 4y = -13$

2. $3x - 2y = -5$
   $4x + y = -14$

3. $2x + 3y = 0$
   $x - 3y = 9$

4. $4x + y = -11$
   $3x - y = -3$

5. $2x - 4y = 2$
   $4x - y = -3$

6. $4x + 4y = -28$
   $x - 4y = 3$

   [A] $(-2, -5)$ [B] $(-48, -2)$ [C] $(0, -7)$ [D] $(-5, -2)$

7. $4x + 5y = 5$
   $x - 5y = -30$

8. $2x + 2y = -10$
   $4x - y = -10$

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

10. $3x - 4y = -5$
    $2x + 3y = -9$

Solve the system by the elimination method:

11. $2x + 2y = 14$
    $x - 2y = -2$

12. $3x + 4y = 14$
    $4x + y = 10$

Simplify:

13. $-3\sqrt{8} - \sqrt{27} + 3\sqrt{2} - 3\sqrt{75}$

14. $3\sqrt{5} - 3\sqrt{25} - 4\sqrt{80}$

15. $-3\sqrt{3} - \sqrt{30{,}000} - 4\sqrt{48}$

16. During the sale, the price of the bicycle was marked down 29 percent. The sale price of the bicycle was $121. What was the original price of the bicycle?

17. The experimental treatment caused side effects in 31% of those who had it. If 1271 experienced side effects, how many people had the experimental treatment?

18. The assessed value of a house increases 13 percent every year. If it is valued at $145,000 this year, what would be the assessed value of the house next year?

19. The number of bacteria increased by 215 percent overnight. If there were 20,000 bacteria yesterday, how many bacteria were present this morning?

20. The advertisement of the super blow-out sale caused the number of shoppers to increase by 250 percent. If 420 shoppers were there before the advertisement, how many were there after the advertisement?

21. Add. Write the answer with all exponents positive. $x^{-1}y^3 + 3z^{-3}$

22. Add. Write the answer with all exponents positive. $x^{-3}yz^2 + wy^2z^3$

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Simplify:

23. $\dfrac{c+d}{\dfrac{1}{e}}$

24. $\dfrac{\dfrac{m}{v}}{\dfrac{w}{v+m}}$

25. Evaluate: $-\dfrac{-b-a\cdot 4-a}{3+\sqrt{-109-\left(-b^3\right)}} - \left[(a-b\cdot 4+4)\dfrac{1}{3}+4\right]^0$ for $a = 2$ and $b = 5$

26. Evaluate. Do not use a calculator. $\sqrt{196}$ - $\sqrt{121}$ + $\sqrt{144}$ + $\sqrt{169}$

27. Evaluate: $5^2-2^2\pm\sqrt{4}$

28. Simplify: $-6\left\{\left[(-2-2)-\left(-3^0-4\right)-2\right]-2\right\}\pm\sqrt{25}$