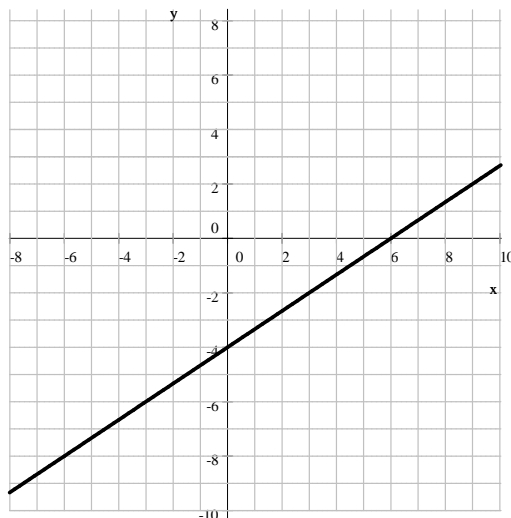


9. Which of the following is an equation of the line shown in the figure below?



- A) $y = \frac{2}{3}x + 6$ B) $y = \frac{2}{3}x - 4$ C) $y = \frac{3}{2}x - 4$ D) $y = \frac{3}{2}x + 6$

10. Factor $27p^3 - 64y^3$

- A) $(3p - 4y)(3p^2 + 144py + 4y^2)$ D) prime
 B) $(3p - 4y)(9p^2 + 12py + 16y^2)$ E) $(9p + 16y)(9p^2 - 12py + 16y^2)$
 C) $(9p - 16y)(9p^2 + 12py + 16y^2)$ F) $(3p - 4y)^3$

11. Simplify the complex fraction $\frac{1 - \frac{4}{z^2}}{1 + \frac{2}{z}}$

- A) $-\frac{2}{z}$ B) $\frac{z+2}{z}$ C) $\frac{z-2}{z}$ D) $\frac{3}{z}$

12. Completely factor the expression $x^4 - 81$

- A) $(x+3)^2(x+3)(x-3)$ C) $(x^2+9)(x+3)(x-3)$ E) $(x+3)^2(x-3)^2$
 B) prime D) $(x^2+9)(x^2-9)$

13. A school purchases tickets to a show. A child ticket costs \$8 and an adult ticket costs \$14. The school has paid a total of \$610 for 65 tickets. How many of the 65 tickets were for adults?

- A) can not be determined B) 27 C) 15 D) 50 E) 5

14. Simplify $\frac{2}{p-5} - \frac{p+11}{p^2-2p-15}$

- A) $-\frac{p+5}{p+3}$ B) $\frac{1}{p+3}$ C) $\frac{p+17}{p^2-2p-15}$ D) $\frac{p+14}{p^2-2p-15}$ E) $\frac{-5}{p^2-17}$

15. Solve $\frac{-3x}{x+1} + \frac{4x+1}{x} = \frac{-3}{x^2+x}$

- A) no solution B) $-1, 0$ C) $-1, -4$ D) -4 E) $\sqrt{2}, -\sqrt{2}$

16. Simplify the expression $\sqrt{12} - 2\sqrt{75} + \sqrt{48}$

- A) $-4\sqrt{3}$ B) $9\sqrt{3} + \sqrt{10}$ C) $\sqrt{3}$ D) $-3\sqrt{10}$

17. Perform the indicated operations and simplify $(3 - 2\sqrt{5})(\sqrt{5} - 1)$

- A) $-8\sqrt{5}$ B) $\sqrt{5} + 7$ C) $5\sqrt{5} - 13$ D) $5\sqrt{5} - 17$

18. Simplify the expression $(3 - \sqrt{5})^2$.

- A) 4 B) $14 - 6\sqrt{5}$ C) $8\sqrt{5}$ D) 20

19. Simplify: $\frac{2m-1}{m^2-m-2} - \frac{1}{m+1}$

- A) $\frac{m-3}{m^2-m-2}$ B) $\frac{1}{m-2}$ C) $\frac{2(m-1)}{m^2-2m-1}$ D) $\frac{-m-3}{2m+2}$

20. Simplify: $\frac{\frac{3}{x-1} - 1}{\frac{2}{x-1} + 1}$

- A) $\frac{-x+2}{x+1}$ B) $\frac{3}{2}$ C) $\frac{2}{3}$ D) $\frac{-x+4}{x+1}$