

Colegio Beato Carlos Manuel Rodríguez
Departamento de Matemáticas

11__

Name: _____

ID: A

PreCálculo 11mo

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. Solve $\frac{1}{x+4} = \frac{1}{x^2+3x-4} + \frac{4}{x-1}$.
- a. -6
b. -2
c. 2
d. 6
- _____ 2. Solve $\frac{x-2}{x+1} + \frac{2x-7}{x-6} = \frac{x-3}{x^2-5x-6}$.
- a. $-2 \pm 3\sqrt{3}$
b. $\frac{2}{3}, 4$
c. $-2 \pm 6\sqrt{3}$
d. $-\frac{2}{3}, -4$
- _____ 3. Solve $\frac{2x-5}{x} + \frac{4x-1}{x+2} = \frac{x+8}{x^2+2x}$.
- a. $\frac{-1 \pm \sqrt{433}}{12}$
b. $-\frac{3}{2}, 2$
c. $-\frac{2}{9}$
d. $-\frac{2}{3}, \frac{1}{2}$
- _____ 4. i^7
- a. $-i$
b. 1
c. i
d. -1
- _____ 5. $(11+i) + (3-15i)$
- a. $14-14i$
b. $-4+4i$
c. $12-12i$
d. $14+16i$
- _____ 6. $(11-12i) + (21-8i)$
- a. $9+19i$
b. $32-20i$
c. $32-4i$
d. $29i-i$
- _____ 7. $(8+10i)(5-8i)$
- a. $40-14i+80$
b. $120-14i$
c. $40-14i-80i^2$
d. $88+50i$

- _____ 8. $\frac{3}{6+7i}$
- a. $\frac{18}{85} + \frac{21}{85}i$ c. $\frac{18}{13} + \frac{21}{13}i$
b. $\frac{6}{85} - \frac{7}{85}i$ d. $\frac{18}{85} - \frac{21}{85}i$
- _____ 9. Solve $x^2 + 2x = 15$ by completing the square.
- a. 3, -5 c. 5, -15
b. 6, -2 d. 4, -15
- _____ 10. Solve $x^2 - 4x - 32 = 0$ by completing the square.
- a. -4, 8 c. -8, 4
b. -8, 16 d. -8, 8
- _____ 11. Solve $-2x^2 + 5x = 0$ by completing the square.
- a. 2.5, 0 c. 0
b. 0, -2.5 d. 5, 0
- _____ 12. Find the exact solution of $x^2 - 3x = 40$ by using the Quadratic Formula.
- a. -5, 8 c. -10, 16
b. -8, 5 d. 40, 43
- _____ 13. Find the exact solution of $-x^2 + 3x + 7 = 0$ by using the Quadratic Formula.
- a. $\frac{3 - \sqrt{37}}{-2}, \frac{3 + \sqrt{37}}{-2}$ c. $\frac{-3 - \sqrt{-19}}{-2}, \frac{-3 + \sqrt{-19}}{-2}$
b. $\frac{-3 - \sqrt{12}}{-2}, \frac{-3 + \sqrt{12}}{-2}$ d. $\frac{-3 - \sqrt{37}}{-2}, \frac{-3 + \sqrt{37}}{-2}$
- _____ 14. Simplify the expression: $\sqrt{16a^{10}}$
- a. $16a^{10}$ c. $4a^{10}$
b. $16a^5$ d. $4a^5$
- _____ 15. Simplify $\sqrt{25x^{20}y^{14}}$.
- a. $5x^{10}y^7$ c. $5x^{20}y^{14}$
b. $12.5x^{20}y^{14}$ d. $12.5x^{10}y^7$
- _____ 16. Simplify $\sqrt[4]{81a^{32}b^{20}}$.
- a. $20.25a^{32}b^{20}$ c. $3a^8b^5$
b. $3a^{32}b^{20}$ d. $20.25a^8b^5$

Name: _____

ID: A

____ 17. Simplify $\sqrt{72x^5y^{12}}$.

a. $6y^6\sqrt{2x^5}$

b. $6\sqrt{2x^5y^{12}}$

c. $6x^2y^6\sqrt{x}$

d. $6x^2y^6\sqrt{2x}$

____ 18. Simplify the expression. $\frac{x^{\frac{4}{7}} \cdot x^{\frac{3}{7}}}{x^{\frac{1}{7}}}$

a. $x^{\frac{7}{8}}$

b. $x^{\frac{6}{7}}$

c. $x^{\frac{7}{6}}$

d. $x^{\frac{8}{7}}$

Short Answer

19. Solve $\frac{a-4}{a+3} = \frac{3a+2}{a+3} + \frac{a}{4}$.