

REVIEW C

1. Write the equation of a line perpendicular to $y = \frac{2}{3}x + 4$ passing through $(-3,5)$

2. Find the 41st term of the sequence 3,7,11,15 use one of your formulas, show the work.

3. $\sum_{n=1}^4 (3n - 2)$ use your formulas to simplify.

4. Simplify $\frac{4+i}{3-2i}$

5. Simplify $(9 - 2i)^2$

6. Solve $|2x - 1| = 3$

7. Solve $2 \leq |x - 3|$

8. Solve $|2x - 1| + 2 < 7$

9. Solve for y : $\frac{4x+2y}{3z} = 5r$

10. Simplify $\left(\frac{2x^3y^{-5}z}{3x^{-4}y^{-8}z^2}\right)^{-3}$

11. $f(x) = 4 - x^2$
 $g(x) = x + 3$ Find $f \circ g$

12. Evaluate: $\begin{vmatrix} -1 & 3 & 5 \\ 2 & -2 & 7 \\ 3 & 1 & 2 \end{vmatrix}$

13. Solve by completing the square:

a) $x^2 - 10x + 2 = 0$

b) $2y^2 + 8y - 3 = 0$

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Answers:

1. $y - 5 = \frac{-3}{2}(x + 3)$

2. 163

3. 22

4. $\frac{10+11i}{13}$

5. $77-36i$

6. $x=-1,2$

7. $x \geq 5$ or $x \leq 1$

8. $-2 < x < 3$

9. $y = \frac{15rz-4x}{2}$

10. $\frac{27z^3}{8x^{21}y^9}$

11. $-x^2 - 6x - 5$

12. 102

13. a) $x = 5 \pm \sqrt{23}$

b) $y = -2 \pm \frac{\sqrt{22}}{2}$

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