

AA2 Week 8 Block

FINAL EXAM REVIEW #A
DO NOT USE A CALCULATOR.

1. Solve $|2x - 3| + 2 = 7$

2. Simplify $(5 - 3i)^2$

3. Solve $2^{x+1} = 6$ (It is OK to leave in terms of logs—remember, no calc!)

4. Simplify $(49^{\frac{1}{2}} - 16^{\frac{1}{2}})^2$

5. $f(x) = \frac{2x-1}{3}$ Find $f^{-1}(x)$.

6. Factor completely $125x^3 + 8y^3$

7. Find the x-intercepts of $f(x) = x^2 - x - 6$

8. .What is the nth term of the sequence
25,19,13,7,...

9. Simplify $\sqrt[3]{\frac{12y}{36x}}$

10. Solve $\sqrt{4x-9} - 1 = x$

11. Write the equation of a line in standard form that passes through (5,-1) and (2,3).

Answers:

1. $x = -1, 4$

2. $16 - 30i$

3. $\frac{\log 6}{\log 2} - 1$

4. 9

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

6. $(5x + 2y)(25x^2 - 10xy + 4y^2)$

7. $(3, 0) (-2, 0)$

8. $a_n = 25 - 6(n - 1)$

9. $\frac{\sqrt[3]{9x^2y}}{3x}$

10. $1 \pm 3i$

11. $4x + 3y = 17$