

UNIT 3 - REVIEW for the Recovery Mini QUIZ

Date _____ Period _____

Solve each equation by taking square roots.

1) $4v^2 - 4 = -25$

2) $5b^2 + 5 = 30$

3) $25r^2 - 3 = -2$

Simplify.

4) $(-2 + 2i)(8 - 6i)$

5) $(6 - 7i)^2$

6) $(-8 - 4i)^2$

7) $(2 - 6i)(-5 - 6i)$

8) $(8 + 3i)(-3 - 6i)$

Find all zeros.

9) $f(x) = x^2 - 9x + 12$

10) $f(x) = 2x^2 + 12x + 1$

11) $f(x) = x^2 + x + 3$

12) $f(x) = x^2 - x + 11$

Simplify.

13) $\frac{3 + 3i}{-5 - 3i}$

14) $\frac{3i}{-3 + 3i}$

15) $\frac{4 - i}{-8i}$

16) $\frac{3}{2 - \sqrt{5}}$

17) $\frac{8 + 9\sqrt{5}}{4\sqrt{2}}$

18) $\frac{-1 + 5\sqrt{7}}{\sqrt{12}}$

Answers to UNIT 3 - REVIEW for the Recovery Mini QUIZ

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|---|---|---|--|
| 1) $\left\{ \frac{i\sqrt{21}}{2}, -\frac{i\sqrt{21}}{2} \right\}$ | 2) $\{\sqrt{5}, -\sqrt{5}\}$ | 3) $\left\{ \frac{1}{5}, -\frac{1}{5} \right\}$ | 4) $-4 + 28i$ |
| 5) $-13 - 84i$ | 6) $48 + 64i$ | 7) $-46 + 18i$ | 8) $-6 - 57i$ |
| 9) $\left\{ \frac{9 + \sqrt{33}}{2}, \frac{9 - \sqrt{33}}{2} \right\}$ | 10) $\left\{ \frac{-6 + \sqrt{34}}{2}, \frac{-6 - \sqrt{34}}{2} \right\}$ | 11) $\left\{ \frac{-1 + i\sqrt{11}}{2}, \frac{-1 - i\sqrt{11}}{2} \right\}$ | |
| 12) $\left\{ \frac{1 + i\sqrt{43}}{2}, \frac{1 - i\sqrt{43}}{2} \right\}$ | 13) $\frac{-12 - 3i}{17}$ | 14) $\frac{-i + 1}{2}$ | |
| 15) $\frac{4i + 1}{8}$ | 16) $-6 - 3\sqrt{5}$ | 17) $\frac{8\sqrt{2} + 9\sqrt{10}}{8}$ | 18) $\frac{-\sqrt{3} + 5\sqrt{21}}{6}$ |