Review for Exam 4
MA 102

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1) Add or subtract: $3\sqrt{48} - 8\sqrt{75} + \sqrt{54}$.

2) Solve $\sqrt{3x+1} + 3 = 0$.

3) Multiply and simplify $(\sqrt{14} - 2)^2$.

4) Rationalize $\frac{\sqrt{2}}{\sqrt{6}}$.

5) Multiply $(3\sqrt{3} + 1)(2 - 4\sqrt{2})$.

6) Simplify $\sqrt{\frac{1}{2}}$.

7) Solve $\sqrt{2x+15} - 1 = 0$.

8) Rationalize $\frac{3\sqrt{g}}{\sqrt{g}-1}$.

9) Multiply $3\sqrt{2}(\sqrt{2} - \sqrt{3})$.

10) Add or subtract $\sqrt{13} - 3\sqrt[3]{13} + 2\sqrt{13}$.

11) Add or subtract $(3i + 1) - (4i - 8)$.

12) Divide $\frac{2i+1}{i}$.

13) Solve $(x - 17)^2 = 36$.

14) Complete the square and factor $d^2 + 8d$.

15) Solve $12d^2 - 4 = 18$.

16) If a right triangle has two legs both of length 7, what is the length of its hypotenuse?

17) Solve $x^2 + 7x + 1 = 0$.

18) Solve $3x^2 + 75 = 0$.

19) Find the power of i: i^{-25}.

20) Multiply $(3i + 1)^2$.