

East Los Angeles College
Department of Mathematics
Math 125
Test 2 Study Guide

Add or Subtract the following irrationals.

1. $3\sqrt{20} - 2\sqrt{5}$

2. $6\sqrt{27} + 2\sqrt{25}$

3. $4\sqrt{20} - 5\sqrt{12}$

4. $6\sqrt{50} + 2\sqrt{9}$

Multiply or Divide the following:

5. $\sqrt{2}(5 + \sqrt{2})$

6. $(4 + \sqrt{6})(2 - \sqrt{3})$

7. $(\sqrt{5} + \sqrt{2})^2$

8. $\frac{2}{\sqrt{3}}$

9. $\frac{3}{\sqrt{7} + \sqrt{2}}$

10. $\frac{4 - \sqrt{x}}{3 + \sqrt{x}}$

Multiply or Divide the following:

11. $\sqrt{5}(2 + \sqrt{5})$

12. $(3 + \sqrt{5})(1 - \sqrt{2})$

13. $(\sqrt{5} + \sqrt{2})^2$

14. $\frac{6}{\sqrt{7}}$

15. $\frac{5}{4 + \sqrt{3}}$

16. $\frac{1 - 5i}{7 + 2i}$

Add or Sub the following complex numbers:

17. $(2 + 11i) + (3 - 5i)$

18. $(-5 + i) - (5 + 4i)$

Multiply or Divide the following:

19. $-3i(4 + 5i)$

20. $(6 - 5i)(6 + 2i)$

21. $(3 + 2i)^2$

22. $(1 + 4i)(1 - 4i)$

23. $\frac{5i}{4 + 2i}$

24. $\frac{2 + i}{3 - 2i}$

Solve for x by using the **Square Root Formula**.

25. $x^2 + 4 = 29$

26. $4x^2 - 5 = 23$

27. $(x + 7)^2 = 64$

28. $(x - 8)^2 = -25$

29. $(x - 5)^2 = 20$

30. $-2(x - 4)^2 - 7 = 15$

Solve the following equations for x by using the **Quadratic Formula**

31. $x^2 - 6x - 4 = 0$

32. $2x^2 - 10x + 5 = 0$

Answer Sheet

1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16		32	