

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

Solve and Graph the following.

1.  $3|x| - 8 < 19$

2.  $|x - 6| + 11 \leq 20$

3.  $-7|x| + 9 \leq -5$

4.  $5|x + 8| > 15$

5.  $-6|x + 1| - 4 \leq 20$

6.  $4|x| + 12 \geq 8$

Write your answers in **interval notation**.

7. Problem 1

8. Problem 2

9. Problem 3

10. Problem 4

11. Problem 5

12. Problem 6

Write your answers in **set notation**.

13. Problem 1

14. Problem 2

15. Problem 3

16. Problem 4

17. Problem 5

18. Problem 6

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Evaluate the following radicals.

19.  $\sqrt{49}$

20.  $\sqrt{100}$

21.  $\sqrt{4x^6}$

22.  $\sqrt{16x^2y^8}$

23.  $\sqrt[3]{-8x^9}$

24.  $\sqrt[3]{\frac{27}{x^3y^{12}}}$

Simplify the following radicals.

25.  $\sqrt{24}$

26.  $\sqrt{36}$

27.  $\sqrt{12x}$

28.  $\sqrt{25x^7}$

29.  $\sqrt{18x^4y^3}$

30.  $\sqrt{15x^8y^5}$

Add or Subtract the following irrationals.

31.  $4\sqrt{12} - 5\sqrt{3}$

32.  $6\sqrt{8} + 2\sqrt{16}$

Multiply or Divide the following:

33.  $\sqrt{6}(4 + \sqrt{6})$

34.  $(2 + \sqrt{3})(1 - \sqrt{5})$

35.  $(\sqrt{7} + \sqrt{3})^2$

36.  $\frac{6}{\sqrt{5}}$

37.  $\frac{5}{\sqrt{6} + \sqrt{3}}$

38.  $\frac{1 + \sqrt{x}}{2 - \sqrt{x}}$

### Answer Sheet

1		20	
2		21	
3		22	
4		23	
5		24	
6		25	
7		26	
8		27	
9		28	
10		29	
11		30	
12		31	
13		32	
14		33	
15		34	
16		35	
17		36	
18		37	
19		38	