

Advanced Algebra
Chapter 1 Test Review

Name _____

Solve and Graph...don't use a calculator ☹

1) $|3x + 10| = 34$

2) $5 - 3d < 2$ or $3d + 9 < 3$

3) $5 - 4d = 7d - 8$

4) $6 \geq 8 - 4x > -3$

5) $-6|3x + 5| + 3 \geq -9$

6) $-12 \leq 3x + 6 \leq 9$

7) $8 > 4x + 12$

8) $|2x + 5| - 3 > 2$

9) $2 - 5x < 17$ or $-5 - 2x > 10$

10) $|3x - 2| \leq 5$

11) $5(3 - 4x) = 7 - 2(4 - x)$

12) $3|4x - 1| - 11 = -2$

13) $-3(1 + x) \leq 1 + 5x$

14) a. Solve for h (don't graph) $SA = 2\pi r(r + h)$

b. find h if $SA = 40$ and $r = 2$ (leave π in your answer)

You may use a calculator ☺

15) The phone company charges \$12 per month for a land line. In addition they charge \$.05 per minute for all long distance calls. In the month of August your bill was \$18.50.

- a) Write an equation or inequality to relate the total cost to the number of long distance minutes (m) you used.

- b) Find the number of long distance minutes used.

16) The perimeter of an isosceles triangle is 86 in. Two of the sides of the triangle are 4 in longer than the 3rd side. Find the length of the sides.

- a) Write an equation or inequality to relate the perimeter to the length of the 3 sides using (x) as a length of the 3rd side.

- b) Find the length of all 3 sides.

17) Kevin needs to run at least 120 miles this week. If Kevin ran 21 miles on Monday and he only has time to run 4 other days this week, what is the minimum number of miles he must run on each of the remaining days to attain his goal?

- a) Write an equation or inequality to relate the total miles (m) to the required distance that Kevin wants to run.

- b) Find the minimum number of miles Kevin must run on his remaining 4 days.