

Name: _____

Algebra 2 Summer Worksheet

**These problems will be used as a pre-assessment. They will not be graded for accuracy, but will be graded on completion. This will give your teacher a baseline for where YOU are at before the class begins. There is no need to copy answers from someone else. Your teacher wants to see what you know, not what someone else knows.

The following problems are a representation of material covered by students in their Algebra I or Geometry course. If students are having trouble with any of the material, they should visit the websites listed below to review the material, and try similar problems online. **Must be done on loose leaf**

<http://www.khanacademy.org/math/algebra>

<http://www.shmoop.com/algebra/>

<http://www.ixl.com/math/algebra-1>

1. State the domain and range of each relation. Then determine whether each relation is a function. Circle Yes or NO. Explain why it is or isn't a function.

a. $\{(14, 1), (-3, 6), (8, 4)\}$

Domain:

Range:

Function : Yes or No

Explain :

b.

2	4
-1	2/3
1	4
2	5
3	6

Domain :

Range :

Function : Yes or No

Explain :

2. Name the quadrant in which each point is located

a. $(-6, -2)$

b. $(-5, 7)$

c. $(-\frac{7}{3}, \frac{13}{5})$

d. $(\sqrt{6}, \sqrt{2})$

3. Find each product

a. $(x + 1)(x + 4)$

b. $(m - 2)(m - 5)$

4. There are two integers. One is 5 more than a number, and the other is 1 less than the same number

a. Write expressions for the two numbers

5. Factor each polynomial

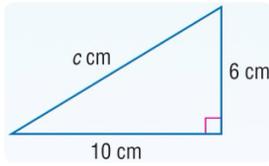
a. $15d - 12cd^2$

b. $a^2 - 13a + 36$

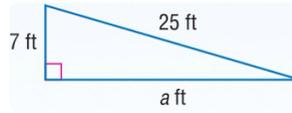
6. The lengths of three sides of a triangle are as follows: 12 yd., 14 yd., and 16 yd. Determine whether the triangle is a right triangle.

7. Find each missing measure. Round to the nearest tenth, if necessary.

a.



b.

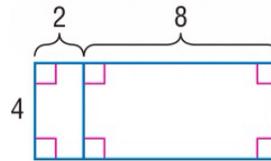


8. Determine whether the pair of figures are similar, congruent, or neither.

a.



b.



9. Find the mean, median, mode, and range of each data set

a. Scores for 16 students on a math test: 85, 100, 92, 36, 74, 88, 92, 86, 88, 82, 98, 70, 78, 92, 84, 100.

b. Weight to the nearest pound of 12 fish: 1, 4, 3, 8, 2, 1, 2, 1, 5, 3, 4, 1.

10. A student council has 6 seniors, 5 juniors, and 1 sophomore as members. How many ways can a 3-member committee be formed that includes one member from each class?

11. Use a $<$ or $>$ to make the following a true statement.

a. $6 \square 4$ b. $-23 \square -18$ c. $\frac{5}{13} \square \frac{3}{8}$

12. Simplify

a. $7(5) - 2(4) + (-42) \div (-7)$ b. $(-30) \div (5) + 3(4) - 8(-2)$

13. Classify the numbers as Real, Rational, Irrational, Integers, Whole, or Natural

a. -100 b. 0 c. $\sqrt{3}$ d. $\frac{12}{7}$