

Honors Algebra I Summer Assignment

Congratulations on making it to Honors Algebra I!!!

The Mathematics Department has decided that it is best for each student enrolled in this class to complete a summer assignment. This packet is that assignment.

A few notes on this assignment:

- Answer all of the questions.
- Show **ALL** work on a separate sheet of paper (loose leaf or computer paper – not paper torn out of a notebook) neatly and orderly. **No work = no credit!**
- Place your answers on the answer sheet provided. Be sure to simplify as much as possible.
- You will only turn in the answer sheet and your work.
- You may **NOT** use a calculator.
- You may use your notes from previous classes and any other resources that will help you complete this packet. However, you may not work with or copy from another student.
- Suggestion: Do one page or a few problems a day throughout the summer and do not wait until the last minute to do it all.
- This packet is due on the **first day** of school and counts as your first two quiz grades!
- If you have any questions, please feel free to e-mail any of the math teachers.

Have a wonderful summer :)

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Evaluate the expression for the given values of the variables.

1.) $3x + 5y$ when $x = 2$ and $y = -1$

Simplify.

2.) $42 - [3(7 - 4)]$

Using the commutative property, rewrite the following expression.

3.) 52×4

Simplify.

4.) $\frac{6d}{4cd}$

Write using exponents.

5.) $4 \times 4 \times 4 \times 4 \times 4 \times 4$

Write in exponential form with 3 as the base.

6.) $3 \times 9 \times 3 \times 27$

Simplify.

7.) 2^5

8.) $(15^2 + 9 \cdot 3 \div 9 - 15) \div 3$

Rewrite using the distributive property.

9.) $8(3x - 4y + 6)$

Simplify.

10.) $5x - 2(x + 4)$

11.) Write a variable expression for each phrase.

- eight times a number
- nine less than a number
- a number increased by seven
- thirty-three divided by number

12.) The cost of renting a car is given by the formula $C = 50n + 0.15d$, where C is the cost in dollars, n is the number of days rented, and d is the distance driven in miles. How much should you budget to rent a car for a 12-day trip, if you plan to drive 275 miles each day?

True or False?

13.) $-9 \leq 2$

14.) $-6 \leq -8$

State the appropriate symbol ($=$, $<$, or $>$) to fill in the blank and make a true statement.

15.) $-\frac{5}{18}$ _____ $-\frac{10}{36}$

16.) $-\frac{5}{11}$ _____ $-\frac{1}{3}$

Simplify.

17.) $-5 + (-11)$

Multiply.

18.) $\frac{4}{3} \times \frac{3}{8}$

19.) $(-3)(4)\left(\frac{1}{6}\right)$

Divide.

20.) $\frac{14}{4} \div \frac{4}{7}$

Factor.

21.) $2x + 6y$

22.) $8c^2d^4 + 6cd^3$

Simplify.

23.) $37 - 5[2(7 - 4)]$

Solve.

24.) $x + 9 = 4$

25.) In an election between two candidates, 660 votes were cast. If the winner received 310 more votes than the loser, how many votes did the loser receive?

26.) $\frac{6}{7}x = 210$

27.) The population of Los Angeles, CA is about 7 times the population of Cleveland, OH. The population of Los Angeles is 3,500,000. What is the population of Cleveland?

28.) $5x + 4 = 19$

29.) $-3n + 16 + 5n = 34$

30.) $-9 = 8(x + 9) - 5x$

31.) Play tickets for two adults and two children cost \$24. A child's ticket costs half as much as an adult's ticket. Find the cost of a child's ticket.

32.) $x - 3 = -3x - 6$

33.) $x + 7 = 2(2x - 4)$

34.) $\frac{x}{3} - \frac{x}{4} = 1$

35.) Solve the equation for t .
 $-6 = t + 7s$

Solve.

36.) $|x| = \frac{3}{4}$

37.) $\frac{2}{15} = \frac{x}{3}$

Rewrite as a decimal.

38.) 22%

Rewrite as a percent.

39.) 0.3

40.) $\frac{3}{5}$

41.) 40% of 70 is what number?

42.) 18 is 30% of what number?
[A] 167 [B] 5.4

[C] 0.6 [D] 60

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Name: _____

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