Graded Homework
Math 365

Multiple Choice. Choose the one alternative that best completes the statement or answers the question.

Find the GCD for the given numbers by an appropriate method.

1. 42 and 378 Answer: 42

Letting W stand for the set of whole numbers, I the set of integers, I^+ the set of positive integers, and I^- the set of negative integers, perform the indicated operation.

2. Find I – W Answer: I^-

Write as an addition problem and find the sum.

3. Susan lost 2 pounds the first week, gained 3 pounds the second week, and lost 4 pounds the third week. What was her net gain or loss?
   Answer: $^-2 + 3 + ^-4 = ^-3$

Evaluate.

4. $3 + 9 \bullet ^-4$ Answer: $^-33$

Find the GCD for the given numbers by an appropriate method.

5. 12, 14, and 18 Answer: 2

Compute or simplify as much as possible.

6. $r- (^- r – s)$ Answer: 2r+s

Simplify.

7. $3 + 2(3w + 4) – w$ Answer: 5w+11

Use least common multiple or greatest common divisor to solve the problem.

8. George has 793 donuts and 143 bagels. He wants to divide his bagels and donuts into stacks so that there are the same number of pastries in each stack. What is the greatest number of pastries that he can place in each stack?
   Answer: 13

Evaluate

9. Let $f(x) = |11-x|$. Find f(35). Answer: 24

Provide an appropriate response.

10. Identify the property of integers being illustrated.
    $^-2 \bullet (2 + 4) = (2 + 4) \bullet ^-2$ Answer: commutative property of multiplication

Classify as true or false.

11. If a and b are even, then GCD(a,b) must be 2. Answer: false

Identify the number as prime, composite, or neither.

12. 61 Answer: prime

Provide an appropriate response.

13. Is $3 \cdot 5 \cdot 7 \cdot 11$ a composite? Answer: yes, it is divisible by 3, 5, 7, 11

Find the LCM for the given numbers by an appropriate method.

14. 24, 54, and 9 Answer: 216

Use least common multiple or greatest common divisor to solve the problem.

15. Planets A, B, and C orbit a certain star once every 3, 7, and 18 months, respectively. If the three planets are now in the same straight line, what is the smallest number of months that must pass before they line up again?
Answer: 126 months

Determine whether the statement is true, false, or sometimes true.

16. If x and y are both integers, then $|x + y| = |x| + |y|$. Answer: sometimes true

Solve the problem.

17. Alan averages 27 miles per gallon of gasoline in his car. How far can he travel on 13 gallons of gasoline? Answer: 351 miles

Classify the statement as true or false.

18. $|x^3| = x^3$ Answer: false

Find all integers x (if possible) that make the statement true.

19. $0 \div x = 0$ Answer: all integers except zero

Find the GCD for the given numbers by an appropriate method.

20. 36518 and 33573 Answer: 589