算术（上）-课后练习册

1. Integer x and y which have the same tens digits. The sum of x and y is 87, and x<y (x and y are positive integers). How many distinct pairs of x and y satisfy the above rule?

2. In a store, price of small-sized coffee beans is $k per bag, while price of larger coffee beans is $m per bag. If someone buys four bags of coffee beans in the store at a price of $30 in total, then k and m could be? Indicate ***all*** such possible combinations.

A. k=7 and m=8

B. k=5 and m=10

C. k=5 and m=15

D. k=8 and m=20

E. k=10 and m=20

3. At most how many integers less than 25 could be the sum of the positive multiple of 4 and the positive multiple of 5?

A. 7

B. 8

C. 9

D. 10

E. 11

4. When selecting four different integers from -5 to 4, inclusive, what is the least possible product of these four numbers?

5. If the sum of 11 consecutive integers is 22，then what’s the least of the list of numbers?

A. -6

B. -5

C. -3

D. -2

E. -1

6. The sum of n consecutive integers is 30

Quantity A: n

Quantity B：4

A. Quantity A is greater.

B. Quantity B is greater.

C. The two quantities are equal.

D. The relationship cannot be determined from the information given.

7. The average of n consecutive integers is 0

Quantity A: The sum of the greatest and least value of the n consecutive integers

Quantity B: The sum of all the n consecutive integers

A. Quantity A is greater.

B. Quantity B is greater.

C. The two quantities are equal.

D. The relationship cannot be determined from the information given.

8. For positive integers X and Y，whose product is 24，which of following statements ***MUST*** be true?

Indicate ***all*** such statements.

A. x+y<24

B. If one is odd, the other one must be even

C. (12/y) is an integer

9. $y=4x^2+5x+7$ where y is an odd，which of the following is true about x?

A. x is odd

B. x is even

C. x is positive odd

D. x is positive even

E. Cannot be determined

10. Which of the following CANNOT be the value of $k+k^2$ where k is a positive integer?

A. A multiple of 10

B. A multiple of 12

C. A number with the units digit as 5

D. A number such that the sum of units digit and tens digit is 9

E. A number with tens digit as 4

11. m is a positive integer and 5m+9 is divisible by 4，which of the following must be an odd?

Indicate ***all*** such items.

A. (m+2)(m+4)

B. 3-m

C. 3+m

D. m^3+9

12. X and y are both integers from 1 to 10，inclusive，and Set S consists of all the possible products of x*y.

Quantity A: The number of odd integers in Set S

Quantity B: The number of even integers in Set S

A. Quantity A is greater.

B. Quantity B is greater.

C. The two quantities are equal.

D. The relationship cannot be determined from the information given.

13. Quantity A: Among all the consecutive integers from 1 to 50, the difference between the sum of all even numbers and the sum of all odd numbers

Quantity B: 25

A. Quantity A is greater.

B. Quantity B is greater.

C. The two quantities are equal.

D. The relationship cannot be determined from the information given.

14. Which of the following CANNOT be the sum of six consecutive odd integers?

A. -24

B. 42

C. 36

D. 96

E. 120

15. a and b are positive integers and ab=24

Quantity A: a^2b

Quantity B: 192

A. Quantity A is greater.

B. Quantity B is greater.

C. The two quantities are equal.

D. The relationship cannot be determined from the information given.

16. n, s and t are all positive integers

If n is a multiple of 7 and $n=s^2t$, which of the following must be a multiple of 49?

A. s

B. t

C. st^2

D. s^2t

E. s^2t^2