

## SAT 数学难题汇总

x^2 表示 x 的平方, =! 表示不等于。pi 表示圆周率

类型 1:

20. The least integer of a set of consecutive integers is -25. If the sum of these integers is 26, how many integers are in this set?

- (A) **25**
- (B) 26
- (C) <mark>50</mark>
- (D) <mark>5</mark>1 (E) 52

<sup>14.</sup> Exactly 4 actors try out for the 4 parts in a play. If each actor can perform any one part and no one will perform more than one part, how many different assignments of actors are possible?

16. Set X has x members and set Y has y members. Set Z consists of all members that are in either set X or set Y with the exception of the k common members (k > 0). Which of the following represents the number of members in set Z ?

- (A) x + y + k
- (B) x + y k
- (C) x + y + 2k
- (D) x + y 2k
- (E) 2x + 2y 2k



20. There are 75 more women than men enrolled in Linden College. If there are n men enrolled, then, in terms of n, what percent of those enrolled are men?

- (A)  $\frac{n}{n+75}\%$
- (B)  $\frac{n}{2n+75}\%$
- (C)  $\frac{n}{100(2n+75)}$ %
- (D)  $\frac{100n}{n+75}\%$
- (E)  $\frac{100n}{2n+75}$ %

## INVENTORY OF CLOCKS AND FREQUENCY OF CHIMES

| 1.8    | Number<br>of Clocks | Chimes <i>n</i> Times<br>on the <i>n</i> th Hour | Chimes Once<br>on the Hour | Chimes Once on<br>the Half Hour |
|--------|---------------------|--|----------------------------|---------------------------------|
| Type A | 10                  | 1  |                            |                                 |
| Type B | 5                   | ~  |                            |                                 |
| Туре С | 3                   |  | 1                          |                                 |

17. A merchant sells three types of clocks that chime as indicated by the check marks in the table above. What is the total number of chimes of the inventory of clocks in the 90-minute period from 7:15 to 8:45 ?



that 🚺

18 If the 5 cards shown above are placed in a smow

is never at eithe end how many different

arrangements are possible?

20. When 15 is divided by the positive integer k, the remainder is 3. For how many different values of k is this true?

(A) One



- (B) Two
- (C) Three
- (D) Four (E) Five



17. On the number line above, there are 9 equal intervals between 0 and 1. What is the value of x ?

19. If a, b. c, and f are four nonzero numbers, then all of the following proportions are equivalent

## EXCEPT

- (A) a/f=b/c
- (B)f/c=b/a
- (C<mark>) c</mark>/a=f/b
- (D)<mark>a/</mark>c=b/f
- (E)af/bc=1/1

8. If a and b are positive integers and  $(a^{\frac{1}{2}}b^{\frac{1}{3}})^{\circ} = 432$ , what is the value of ab ? (A) 6

- (B) 12
- (C) **18**
- (D) 24
- (E) **36**

16. After the first term, each term in a sequence is 3 greater than 1/3 of the preceding term. If t is the first term of the sequence and t=!0. what is the ratio of the second term to the first term?



- (A)  $\frac{t+9}{3}$ (B)  $\frac{t+3}{3}$ (C)  $\frac{t+9}{3t}$ (D)  $\frac{t+3}{3t}$
- (E)  $\frac{9-2t}{3}$

15. The Acme Plumbing Company will send a team of 3 plumbers to work on a certain job. The company has 4 experienced plumbers and 4 trainees. If a team consists of 1 experienced plumber and 2 trainees, how many different such teams are possible?

17. If p. r. and s are three different prime numbers greater than 2, and n = p \* r \* s, how many positive factors, including 1 and n. does n have?

18. If the sum of the consecutive integers from -22 to x, inclusive, is 72, what is the value of x?

- (A<mark>) 2</mark>3
- (B) <mark>2</mark>5
- (C) <mark>50</mark>
- (D) 75 (E) 94

17. For all positive integers j and k. let j R k be defined as the whole number remainder when j is divided by k. If 13 R = 2, what is the value of k?

19, In a set of eleven different numbers, which of the following CANNOT affect the value of the median?

- (A) Doubling each number
- (B) Increasing each number by 10
- (C) Increasing the smallest number only
- (D) Decreasing the largest number only
- (E) Increasing the largest number only



15. A store charges \$28 for a certain type of sweater. This price is 40 percent more than the amount it costs the store to buy one of these sweaters. At an end-of-season sale, store employees can purchase any remaining sweaters at 30 percent off the store's cost How much would it cost an employee to purchase a sweater of this type at this sale?

(A) \$8.40

- (B) \$14.00
- (C)\$ 19.60
- (D) \$20.00
- (E) **\$25.20**

17.Alice and Corinne stand back-to-back. They each take 10 steps in opposite directions away from each other and stop. Alice then turns around, walks toward Corinne. and reaches her in 17 steps. The length of one of Alice's steps is how many times the length of one of Corinne's steps? (All of Alice's steps are the same length and all of Corinne's steps are the same length.)

14. If n and p are integers greater than 1 and if p is a factor of both n +3 and n + 10. what is the value of p?

- (A) **3**
- (B) **7**
- (C) 10
- (D) 13
- (E) **30**

16. In a mixture of peanuts and cashews, the ratio by weight of peanuts to cashews is 5 to 2. How many pounds of cashews will there be in 4 pounds of this mixture?

14. How many integers greater than 20 and less than 30 are each the product of exactly two different numbers, both of which are prime?

- (A) Zero
- (B) One
- (C) Two