

GRE Prep

Venn Diagrams and Word Problems



Venn Diagrams and Word Problems

1. Twice the larger of the two numbers is three more than five times the smaller and the sum of four times the larger and three times the smaller is 71. What is the larger number?
 - A. 11
 - B. 12
 - C. 13
 - D. 14
 - E. 21



Venn Diagrams and Word Problems

2. Three times the first of three consecutive odd integers is 3 more than twice the third. The third integer is?
- A. 11
 - B. 13
 - C. 15
 - D. 17
 - E. 19



Venn Diagrams and Word Problems

3. A club collected exactly \$ 599 from its members. If each member contributed at least \$12, what is the greatest number of members the club could have?
- A. 43
 - B. 44
 - C. 49
 - D. 50
 - E. 51



Venn Diagrams and Word Problems

4. If every donor to a charity drive contributed at least \$14 and \$237 was collected, what is the maximum number of donors?
- A. 13
 - B. 14
 - C. 15
 - D. 16
 - E. 17



Venn Diagrams and Word Problems

5. Jack is now 14 years older than Bill. If in 10 years Jack will be twice as old as Bill, how old will Jack be in 5 years?
- A. 9
 - B. 19
 - C. 21
 - D. 23
 - E. 33



Venn Diagrams and Word Problems

6. A certain grocery purchased x pounds of produce for p dollars per pound. If y pounds of the produce had to be discarded due to spoilage and the grocery sold the rest for s dollars per pound, which of the following represents the gross profit on the sale of the produce?
- A. $(x - y)s - xp$
 - B. $(x - y)p - ys$
 - C. $(s - p)y - xp$
 - D. $xp - ys$
 - E. $(x - y)(s - p)$



Venn Diagrams and Word Problems

7. Lois has x dollars more than Jim has, and together they have a total of y dollars. Which of the following represents the number of dollars that Jim has?

A. $\frac{y-x}{2}$

B. $y - \frac{x}{2}$

C. $\frac{y}{2} - x$

D. $2y - x$

E. $y - 2x$



Venn Diagrams and Word Problems

8. In an English examination 60% failed in English Literature and 52% failed in English Language. 35% of the candidates failed in both subjects. If a total of 77 candidates failed in one or more subjects then what is the total number of candidates taking the examination?



Venn Diagrams and Word Problems

9. In an examination 35% of the candidates failed in both the subjects. If a total of 65 candidates passed one or more subjects, then what is the total number of candidates taking the examination?



Venn Diagrams and Word Problems

10. In an English examination, 70% passed in Literature and 60% passed in English Language, 15% of the candidates failed in both subjects. If a total of 77 candidates failed in one or more subjects, then what is the number of candidates taking the examination?
- A. 100
 - B. 130
 - C. 140
 - D. 145
 - E. 150



Venn Diagrams and Word Problems

11. In a certain class, $\frac{5}{12}$ of all the students are girls and $\frac{1}{4}$ of all the students are girls who took Spanish. What fraction of the girls took Spanish?
- A. $\frac{5}{48}$
 - B. $\frac{5}{12}$
 - C. $\frac{2}{5}$
 - D. $\frac{3}{5}$
 - E. $\frac{7}{12}$



Venn Diagrams and Word Problems

12. Dwayne planted 70 acres with two types of beans: navy and pinto. Each acre of navy beans yielded 27 bushels and each acre of pinto beans yielded 36 bushels. If Dwayne grew twice as many bushels of pinto beans as navy beans, how many acres of pinto beans did he plant?
- A. 28
 - B. 30
 - C. 35
 - D. 40
 - E. 42



Venn Diagrams and Word Problems

13. Two trees have a combined height of 60 feet, and the taller tree is x times the height of the shorter tree. How tall is the shorter tree, in terms of x ?
- A. $60/(1+x)$
 - B. $60/x$
 - C. $30/x$
 - D. $60-2x$
 - E. $30-5x$



Venn Diagrams and Word Problems

14. If $2x^2 - bx + 36 = 7x$ has one root equal to 3, what is the value of the other root?
- A. 4
 - B. 6
 - C. 7
 - D. 14
 - E. 25



Venn Diagrams and Word Problems

15. A certain number of candies is distributed equally among Alice, Ben, Cane and Dino. Alice further distributes $\frac{3}{4}$ of his candies equally among the other three people. Later, Ben gives half of his candies to Dino. What fraction of the total number of candies does Dino have in the end?



Venn Diagrams and Word Problems

16. If powdered drink mix costs c cents per ounce and p pounds of it are purchased by a supplier who intends to resell it, what will be the total revenue, in dollars, in terms of c and p if all of the drink mix is sold at a price per ounce equivalent to three times what the supplier paid? (16 ounces = 1 pound and 100 cents = 1 dollar)
- A. $48cp$
 - B. $32cp / 100$
 - C. $100(32) / (cp)$
 - D. $12cp / 25$
 - E. $25cp / 12$



Venn Diagrams and Word Problems

17. A rectangular public park has an area of 3,600 square feet. It is surrounded on three sides by a chain link fence. If the entire length of the fence measures 180 feet, how many feet long could the unfenced side of the rectangular park be? Indicate all such lengths.
- A. 30
 - B. 40
 - C. 60
 - D. 90
 - E. 120



Venn Diagrams and Word Problems

18. In a company of 200 employees, the number of employees who received a bonus in the last quarter but did not receive a promotion is less than the total number of employees who received a promotion, and exactly 15 employees received neither a bonus nor a promotion.

Quantity A

Number of employees who
received a bonus but did not
receive a promotio

Quantity B

93



Venn Diagrams and Word Problems

19. In a company of 500 employees, 400 employees have an engineering degree, and 150 employees have a management degree. At least 100 employees have neither engineering nor management degrees.

Quantity A

Number of employees who
have both engineering and
management degrees.

Quantity B

150



Venn Diagrams and Word Problems

20. Of 60 birds found in a certain location, 20 are songbirds and 23 are migratory. (It is possible for a songbird to be either migratory or not migratory)

Quantity A

The number of the 60 birds
that are neither migratory
nor songbirds

Quantity B

16





Thank you