GMAT Test 4

37 questions – 75 minutes

1. A salesperson gets a 15% commission on each sale he makes. How many sales of $270 each must he make in order to reach a salary of at least $1000?

(a) 15
(b) 24
(c) 25
(d) 26
(e) 52

2. In how many different ways can five people be seated on a five-seat bench if two of them must sit next to each other?

(a) 24
(b) 48
(c) 120
(d) 240
(e) 480

3. Liqueur A contains 24% of alcohol. What is the alcohol concentration of the mixed cocktail of liqueur A and B?
(1) The mixing ratio of liqueur A and B is 1:4
(2) The alcohol concentration of liqueur B is 1.5 times greater than the alcohol concentration of the mixed cocktail.

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4. What is the average height of X buildings, each with height P meters, and 4X buildings each with height P/2?
(1) X = 5, P = 35.
(2) P = 40.

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5. A, B, C and D are four consecutive points on a straight line. What is the distance between A to D?
(1) AC = 6.
(2) BD = 8.

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6. The area of an isosceles trapezoid with sides of length 5 and bases of length 8 and 14 is?

(a) 22
(b) 32
(c) 44
(d) 55
(e) 56

7. One gallon of soft drink is made of 40% orange juice and 60% water, how many additional gallons of orange juice must be mixed in to make the orange juice 60% of the soft drink?

(a) 0.5
(b) 1
(c) 1.25
(d) 1.5
(e) 2

8. A merchant gets a 5% discount on each meter of fabric he buys after the first 2,000 meters and a 7% discount on every meter after the next 1,500 meters. The price, before discount, of one meter of fabric is $2, what is the total amount of money the merchant spends on 4,500 meters of fabric?

(a) $8,617
(b) $8,710
(c) $8,810
(d) $8,835
(e) $8,915

9. If X, Y and Z are positive integers, is X greater than Z – Y?
(1) X – Z – Y > 0.
(2) $Z^2 = X^2 + Y^2$.

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10. Zigfield bought his car using M% of his bank savings. He also bought a house that costs 4 times the price of the car. What is the price of the house?
(1) M = 12.
(2) The price of the car and the house was $140,000.

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11. On a summer camp, 25% of the campers paid $120 each, 35% paid $80 each and the rest paid $65 each. What percentage of the total amount paid came from the campers who paid $80?

(a) 18%
(b) 21%
(c) 26%
(d) 33.3%
(e) 37.5%

12. A snail, climbing a 20 feet high wall, climbs up 4 feet on the first day but slides down 2 feet on the second. It climbs 4 feet on the third day and slides down again 2 feet on the fourth day. If this pattern continues, how many days will it take the snail to reach the top of the wall?

(a) 12
(b) 16
(c) 17
(d) 20
(e) 21

13. John spent a total of $135 on baseball tickets. The price of a ticket is either $12 for the field seats or $5 for the balcony. What is the minimum amount of dollars he could have spent for the $12 tickets?

(a) $48
(b) $60
(c) $84
(d) $96
(e) $120

14. One of the solutions of the equation X^2-X-k=5, is –3. What is the other solution of the equation?

(a) 4
(b) -4
(c) 5
(d) 6
(e) 24

15. Is the largest of 7 consecutive numbers odd?
(1) The product of the seven numbers is zero.
(2) The sum of the seven numbers is zero.

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16. If X and Y are positive integers, what is the ratio between Y and X?
(1) XY = 150.

(2) Y is 22% of X.

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17. What is the value of $(X^2 + Y^2)$?
(1) $(X – Y)^2 = 36$.
(2) $(X + Y)^2 = 48$.

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18. There are X dogs in the dog hound, each dog eats Y Kg of food every day. What percent of the total food weight does each dog eat?
(1) If there were 3 dogs less then each dog could eat 1.2 Kg more than he is does now.
(2) If there were half the dogs, each dog could eat 3 Kg more than he is does now.

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19. What is the sum of all even integers between 30 and 50, inclusive?

(a) 640
(b) 540

(c) 480
(d) 440
(e) 240

20. The price (p) of product X depends on the yearly number of units produced (n) according to the following formula: p = (500-n) / 10. What will the estimated price per unit be next year if an estimated number of 260 units will be sold?

(a) 24
(b) 26
(c) 50
(d) 60
(e) 240

21. John must arrange 3 different physics books and 3 different mathematics books on one shelf. If the first book on the leftmost side is a mathematics book and no physics book is next to another physics book, how many different arrangements exist?

(a) 6
(b) 9
(c) 36
(d) 120
(e) 720

22. An investor receives a total combined return of 7% on his two different investments. On his $10,000 investment he receives a return of 6%. What is the return on his $20,000 investment?

(a) 7.25%
(b) 7.5%
(c) 8%
(d) 8.5%
(e) 9%

23. What is the probability of getting an identical result on three consecutive tosses of a coin?

(a) 1/2
(b) 1/4
(c) 1/8
(d) 1/16
(e) 1/2 + 1/4

24. If x and y are positive integers, is $5^x(1/4)^y < 1$?
(1) Y = 3x.

(2) X = 2.

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25. If A is a prime number, what is the value of A?
(1) 0 < A < 10.
(2) (A – 2) is divisible by 3.

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26. What is the value of (A/5 + B/5)?
(1) A + B = 100.
(2) $\frac{A+B}{10}=10$.

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27. A salesperson receives a base salary of $1000 per month and a commission of 7.5% of the selling price of each item sold above the first 50 items. If this month she sold 210 items for $150 each, what will her monthly salary be?

(a) $1,500

(b) $1,800
(c) $2,100
(d) $2,500
(e) $2,800

28. What is the probability that the sum of the results when two dice are rolled simultaneously will be 9?

(a) 1/3
(b) 7/36
(c) 1/6
(d) 10/36
(e) 1/9

29. What is the units' digit of the following expression $(13)^5(15)^4(17)^5$?

(a) 0
(b) 1
(c) 3
(d) 5
(e) 9

30. Is $B^3 \geq B^2$?
(1) B is an integer.
(2) B is positive.

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31. If Peter spends $460 on three pairs of shoes, how much did the least expansive shoes cost?
(1) The ratio between the most expansive shoes to the least expansive shoes is 3 to 1.
(2) The ratio between the least expansive shoes to all the other ones is 1 to 5.

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32. What percent of 20 is Y?
(1) 50 percent of Y is 5.
(2) Y percent of 200 is 20.

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33. What is the number of different ways to choose a chairman, two deputies and two assistants for the class committee out of 7 students up for election?

(a) 25
(b) 210
(c) 630
(d) 840
(e) 2520

34. A factory has a fixed cost of $45,000 a month, and a cost of $2.5 for every item produced. If the selling price of a single item is $5, what is the number of items must be sold monthly for the factory to cover its cost exactly?

(a) 9,000
(b) 14,000
(c) 18,000
(d) 22,500
(e) 27,000

35. John traveled 80% of the way from Yellow-town to Green-fields by train at an average speed of 80 miles per hour. The rest of the way John traveled by car at an average speed of *v* miles per hour. If the average speed for the entire trip was 60 miles per hour, what is *v* in miles per hour?

(a) 30
(b) 40

(c) 50
(d) 55
(e) 70

36. The ratio between the number of sheep and the number of horses at the Stewart farm is 4 to 7, If each horse is fed 230 ounces of horse food per day and the farm needs a total 12,880 ounces of horse food per day, what is the number of sheep in the farm?

(a) 18
(b) 28
(c) 32
(d) 56
(e) 60

37. The volume of water inside a swimming pool doubles every hour. If the pool is filled to its full capacity within 8 hours, in how many hours was it filled to one quarter of its capacity?

(a) 2
(b) 4
(c) 5
(d) 6
(e) 7