GMAT TEST 2 – Key for MATH SECTION

(37 questions, 75 minutes)

1. X is an even number and Y is a positive odd number. Which of the following expressions cannot be even?

(a) $(XY)^Y$
(b) X^3Y^3
(c) X^3
(d) XY
(e) Y^2

The fastest way to solve this problem is by plugging in some numbers.
Lets say: X = 2, Y = 1.
According to answer e: 1 x 1 = 1 and that must be an odd number.
The correct answer is E.

2. How much interest will $2,400 earn at an annual rate of 8% in one year if the interest is compounded every 4 months?

(a) $141
(b) $150
(c) $197
(d) $234
(e) $312

Here, it is enough to calculate the simple interest of 8% per year.
$2,400 x 8/100 x 1 = $192. Since we are calculating as a compounded rate, the interest should be a bit higher, or C as the correct answer.

3. What is the value of P?
(1) P is even.
(2) P is a square of a prime number.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) alone is insufficient since there is infinite number of possibilities.
Statement (2) alone is insufficient since there is an infinite number of primes.

The combination of the statements is sufficient since the only even square of a prime number is can be 2^2, which is 4. Both statements, taken together, are sufficient. The correct answer is C.

4. If AB = 40, what is the value of AB(A + 2B)?
(1) A – B = -18.
(2) $A^2B = 80$.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) alone is insufficient since we need the value of A + 2B.
Statement (2) is sufficient. $A^2B = A(AB) = A(40) = 80$ **è** A=2 and B=20.
Now, we know that A + 2B = 42 and we can calculate the required expression.
The correct answer is B.

5. If $X^3Y = 24$, what is the value of $(X^3Y^3 – X^2Y^2)$?
(1) $X^2Y^2 = 36$.
(2) $X^3Y^2 = 72$.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) is insufficient since the expression given is only one of two needed.
Statement (2) by itself is sufficient since $X^3Y^2 = (X^3Y)Y = 24Y = 72$ **è** Y = 3.
If Y=3 then X^3=8 and so X=2.
The expression required is a combination of X and Y and is then calculable.
The correct answer is B.

6. X is a prime number bigger than 10. Also, $Y = X+X^3+X^5+X^7$.
What is definitely true about Y?

(a) Y is a prime number.
(b) Y is odd.

(c) Y is even.
(d) Y is divisible by 3.
(e) Y is divisible by 7.

Because X is a prime number bigger than 10, it must be odd. Ignoring the powers of X in the expression of Y, you'll see that Y is a sum of 4 odd numbers therefore it must be even. The correct answer is C.

7. What is the least integer that is a sum of four different primes each greater than 20?

(a) 79
(b) 83
(c) 120
(d) 133
(e) 169

Find the sum of the first 4 primes larger than 20: 23+29+31+37=120. The correct answer is C.

8. If X>X, the average of X and Y is Z, and the average of Z and X is W, what is the value of (x-w) / (w-y) = ?

(a) 1/4
(b) 1/3
(c) 1/2
(d) 3
(e) 4

The best way is to take an example: Assume x=2 and y=10, then their average z=6. The average of x=2 and z=6 is w=4. Therefore:

$$\frac{x-w}{w-y}=\frac{2-4}{4-10}=\frac{-2}{-6}=\frac{1}{3}.$$

The correct answer is B.

9. One quarter of the workers at the factory are clerical, one fifth are technical, half are administrative and the other 25 are managerial. How many workers total are there in the factory?

(a) 250
(b) 366
(c) 400
(d) 500
(e) 2500

First, calculate the fraction of the 25 managerial workers out of the total number of workers by subtracting the fractions given from 1.

$$1-\frac{1}{4}-\frac{1}{5}-\frac{1}{2}=1-\frac{5+4+10}{20}=1-\frac{19}{20}=\frac{1}{20}.$$

The 25 managerial workers are 1/20 of the workers, therefore, 25 x 20 = 500, a total number of 500 workers. The correct answer is D.

10. The price of a product is $*a*. Bill bought *s* products and then sold 80 percents of them $*b*. which of the following represents the whole deal if Bill's profit was three times the cost?

(a) 0.8sb = 4sa.
(b) (1-0.8)s –ab = 3s.
(c) 3(0.8a – sb) = sa.
(d) (s-0.8s)(b-a) = 3.
(e) (s0.8s) / (b-a) = 3.
This statement is equivalent to 0.8sb – sa = 3sa. The income is 0.8sb, the cost is sa, so the profit is three times the cost.
The correct answer is A.

11. X equals to Y% of what number?
(1) X = 3Y.
(2) 6Y+2X = 56X/14.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
From (1) we have X and Y and therefore we can find A easily, A = 300.
(2) Is identical to (1), simplify it and see that it can be written as X = 3Y.
Either statement by itself is sufficient. The correct answer is D.

12. Which expression is larger 1/(5 - X) or X/5?
(1) X < 8.
(2) X > -8.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.

The easiest way to solve such a problem is to plug in numbers.
Use both statements to see that they are both insufficient even together.
Take X=0: 1/(5 – X) = 1/5 and X/5 = 0, in this case the first expression is larger.
Take X=7: 1/(5 – X) = -1/2 and X/5 = 7/5, in this case the second expression is larger.
We can see that the answer is dependent on which numbers we choose and more data is required in order to determine the answer. The correct answer is E.

13. X is a two-digit number. If the ratio between the units digit and the tens digit is 1 to 2, what is the value of X?
(1) The sum of the digits multiplied by the tens digit is 54.
(2) The product of the digits divided by 2 is 9.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
There are a limited number of possibilities: 21, 42, 63 and 84.
According to statement (1), the only number that is compatible is 63.
According to statement (2), the only number that is compatible is also 63.
Either statement alone is sufficient. The correct answer is D.

14. A grocer bought 24Kg of coffee beans at price *X*. After a while one third of the stock got spoiled so he sold the rest for 200$ per Kilo and made a total profit of twice the cost. What must be price X?

(a) 66 2/3$.
(b) 50 1/3$.
(c) 44 4/9$.
(d) 33 1/3$.
(e) 24 1/2$.
The total income is 16x200. The cost is 24X, and the total profit is 3200 – 24X = 48X. The correct answer is C.

15. Kenny is three times older than Bob. In *P* years he will be twice older than Bob will be *Q* years later. Which of the following represents Kenny's age comparing to Bob's? (If X = Kenny's age)

(a) X + P = 6X(P+Q).
(b) 2(X+P) = 3X + Q.
(c) (X+P)/2 = X/3 + P + Q.
(d) 3(X+P+Q) = 2X.

(e) 3X = 2(P + Q).
X is Kenny's age. X/3 is Bob's age. Answer C is equivalent to (X+P) = 2(X/3+P+Q), which means that in P years, X+P is 2 times (X/3+P) plus Q years. The correct answer is C.

16. A Cuban cigar would cost 1 dollar less than 1.5 times a French cigar, had the French cigar cost 0.7 dollar less than it does now. An Arabian cigar costs 50 cents more than 1.5 times the Cuban cigar. The three cigars together cost 74.7 dollars. What is the price of the French cigar?

(a) 16.7$.
(b) 23$.
(c) 25.5$.
(d) 35$.
(e) 37.4$.
Sign the French cigar as X. The Cuban cigar is 1.5(X-0.7) - 1.
The Arabian cigar is 1.5[1.5(X-0.7)-1] + 0.5.
The sum of all the three is 74.7. The correct answer is A.

17. Ashley paid 5 dollars for 1 notebook and 1 pencil. If both prices were integers, how many pencils did Ashley buy if she paid 93 dollars for the pencils and for 15 notebooks?

(a) 6.
(b) 16.
(c) 18.
(d) 21.
(e) 26.
One notebook can cost 1, 2, 3 or 4 dollars. Subtract 15 times each price from 93, and check if what you get is divisible by 5 minus the price of the notebook. The number could be 24, 21 or 33. The correct answer is D.

18. What percent is X of Y?
(1) Y is bigger than 2X by 54.
(2) X is smaller than 3Y by 72.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) can be written as: Y = 2X + 54.

Statement (2) can be written as: X = 3Y – 72.
Combining both statements, we have two different equations containing X and Y and so we can solve and find the value of X and Y and calculate what is X percent of Y.
The correct answer is C.

19. A store bought Q windows at $150 per window and W shelves at $75 per shelve. What is the total price of the windows and the shelves?
(1) The Q windows cost $600.
(2) Q + W/2 = 12.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) is all about the windows and therefore it is not sufficient by itself.
Statement (2) tells us that Q + W/2 = 12, this is sufficient because the total price of windows and shelves is 150Q + 75W.
Multiply the data in statement (2) be 150 to get: 150Q + 75W = 18,000.
Statement (2) is sufficient by itself.
The correct answer is B.

20. What is the perimeter of a rectangle having an area of 60?
(1) The length and width of the rectangle are even integers smaller than 25.
(2) The length of the rectangle is larger than three times the width.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
The question tells you that the area is 60, the area of a rectangle is equal to length x width, in order to find the perimeter, one should find the value of the length and the value of the width.
Statement (1) tells us that both the length and the width are even integers and therefore we know their exact values because 60 can be factorized to: 1x60, 2x30, 3x20, 4x15, 5x12 and 6x10.
The only even integers smaller than 25 are (6x10) and we know the perimeter.

The correct answer is A.

21. X is a positive integer, is X even?
(1) $9X^2$ is divisible by 4.
(2) 3X + 2 is divisible by 8.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) tells us that $9X^2$ is an even number (it's divisible by 4) and therefore X^2 must be an even number. An odd number squared is also odd and therefore X must be even, this statement is sufficient.
Statement (2) tells us that 3X + 2 is an even number (it's divisible by 8).
If you subtract 2 from (3X+2) the result will still be even. If 3X is even than X must be even. This statement is also sufficient to answer the question. The correct answer is D.

22. The sum of the ages of 22 boys and 24 girls is 160.What is the sum of ages of one boy plus one girl, if all the boys are of the same age and all the girls are of the same age, and only full years are counted?

(a) 5.
(b) 6.
(c) 7.
(d) 8.
(e) 9.
Changing the equality: 22X + 24Y = 160, we get: X = (80-12Y) / 11. Since X must be a positive integer, Y must be smaller than 7. The numerator will be 11, 22, 33, 44 etc. Y must be 3 and X=3. X+Y = 7. The correct answer is C.

23. X percents of the rooms are suits, and Y Percents of the rooms are painted light blue?
Which of the following best represents the least Percentage of the light blue painted suits?

(a) X-Y.
(b) Y-X + 100.
(c) 100X-Y.
(d) X+Y-100.
(e) 100-XY.

D shows us the difference between the sum of the percentages and 100 percent. If X+Y>100, this percent must be subtracted from the sum X+Y in order to get 100 percent. Sum of sets minus the total equals the congruence. The correct answer is D.

24. David bought 13 BMW cars for a total price of 1,105,000 dollars. If he wants to make a profit of 39,000 dollars in the deal, at what price should he sell one car?

(a) 85,000$.
(b) 88,000$.
(c) 94,000$.
(d) 124,000$.
(e) 139,000$.

The buying price for one car is 1,105,000 / 13 = 85,000.The wished for a car is 39,000 / 13 = 3,000. So the selling price must be 85,000 + 3,000. The correct answer is B.

25. Loren bought a roll of cloth and sold it for a 5% profit based on the selling price. If Loren's profit was $45.5 total on the cloth, how much did it cost her to buy the cloth?

(a) $455.
(b) $525.5.
(c) $675.
(d) $810.5.
(e) $864.5.

5% of the total price of the cloths is 45.5 dollars, multiply this number to get the entire 100% of the total selling price: (45.5 x 20 = $910). Now subtract the profit $45.5 to get the cost: 910-45.5=$864.5. The correct answer is E.

26. X is a positive integer, is X even?
(1) $9X^2$ is divisible by 4.
(2) 3X + 2 is divisible by 8.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.

Statement (1) tells us that $9X^2$ is an even number (it's divisible by 4) and therefore X^2 must be an even number. An odd number squared is also odd and therefore X must be even, this statement is sufficient.
Statement (2) tells us that 3X + 2 is an even number (it's divisible by 8).

If you subtract 2 from (3X+2) the result will still be even. If 3X is even then X must be even. This statement is also sufficient to answer the question.

27. If 10% of the employees of the state fare are police officers, what is the number of employees who are not police officers?
(1) 5% of the police officers employed in the fare are woman.
(2) 45% of the employees at the state fare are woman.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
In order to know how many people aren't officers you need a fix value, in other words you need to translate percentage into real values.
Statement (1) doesn't give any real numbers and therefore it's not sufficient.
Statement (2) is the same as one in that matter, if we wanted to know the percentage of the woman officers, the statements would have been satisfying. More data is required. The correct answer is E.

28. In a recent tender, X people participated. 35% of the X people, who made an offer won the specific tender they participated in. 70% of the rest, were disappointed from the result of the tender. Which of the following expressions represents the number of people who weren't disappointed although they didn't win the tender?

(a) 39X/200.
(b) 25X/50.
(c) 19.5X/200.
(d) 35X/250.
(e) 90X/200.
65X/100 is the number of people who didn't win the tender. 30% of that number is the number of people who weren't deeply disappointed about the fact that they didn't win. 30 x (65X/100) /100 = 19.5/100 = 39/200. The correct answer is A.

29. What is 0.01 x 5 x 0.03 in terms of percent?

(a) 15%
(b) 1.5%
(c) 0.15%
(d) 0.015%
(e) 0.0015%

Since 0.01 and 0.03 each have 2 decimal places, their product must have 4 (2 + 2) decimal places. Because 1 x 3 x 5 is 15, you need to add 2 zeros to get the correct number of decimal places, so the product of 0.01, 5 and 0.03 is 0.0015. To change a decimal to a percentage you multiply by 100 and move the decimal point 2 places to the right, so 0.0015 is 0.15%. The correct answer is C.

30. In a barrel of juice there is 30 liters; in a barrel of beer there are 80 liters. If the price ratio between a barrel of juice to a barrel of beer is 3:4, what is the price ratio between one liter of juice and one liter of beer?

(a) 3:2.
(b) 2:1.
(c) 3:1.
(d) 4:3.
(e) 3:4.
Pick numbers: a barrel of beer costs $40 and a barrel of juice costs $30 according to the given ratio. One liter of beer will cost $0.5 and one liter of juice will cost $1. Therefore the price ratio is 2:1. The correct answer is B.

31. Is X greater than 1?
(1) $X > X^2$.
(2) $-X < -X^2$.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) tells you that X is greater than X^2, that is true only if X is between zero and one and so the answer to the question is no. Statement two is identical to one, multiply both sides by (-1) and don't forget to change the sign of the inequality. Either statement is sufficient by itself. The correct answer is D.

32. What is the sum of 7 consecutive integers?
(1) The median of the seven integers is 8.
(2) One of the integers is 7.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.

(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
From statement (1) we have only one set of numbers. We have 5, 6, 7, 8, 9, 10 and 11.
Statement (2) provides no additional data because we can see several sets containing 7.
The correct answer is A.

33. M is a positive integer, is M odd?
(1) $2M^3 + 2M$ is divisible by 8.
(2) M + 10 is divisible by 10.

(a) Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
(b) Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
(c) Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
(d) Either statement BY ITSELF is sufficient to answer the question.
(e) Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.
Statement (1) tells us that $2M^3 + 2M$ is divisible by 8 and so $M^4 + M$ is divisible by 4 and is even. We have two choices: M^3 and M are either odd or even. This statement is insufficient.
Statement (2) is sufficient, if M + 10 is divisible by 10 then M + 10 is an even number. This statement is sufficient and the answer is B.

34. From the starting point in a boat race, one competitor started to sail north at a speed of 1.6 Km/h, the other competitor started to sail west at a speed of 1.2 Km/h. What is the distance in Km between the two competitors after 5 hours?

(a) 10.
(b) 12.
(c) 12.5.
(d) 14.
(e) 15.4.
One is going north and the other is going west. The distance can be calculated using the Pythagorean theorem. One made a distance of 1.6 x 5 = 8 Km, The second one did 1.2 x 5 = 6 Km. The distance between them is the square root of (64 + 36) = 10 Km. The best answer is A.

35. George can fill Q cans of paint in 3 minutes. If there are R cans of paint in one gallon, how many gallons can George fill in 45 minutes?

(a) 30R/Q.

(b) 15R/Q.
(c) 30Q/R.
(d) 5Q/R.
(e) 15Q/R.
George can fill Q/3 cans of paint in one minute **à** There are R cans in one gallon, so R/(Q/3) = 3R/QIs the time it takes George to fill one gallon (in minutes). In 45 minutes George can fill up 45/(3R/Q) = 15Q/R. The correct answer is E.

36. If (4 # 2 = 14) and (2 # 3 = 6), what can replace (a # b)?

(a) ab.
(b) (a+3)b
(c) $a^2 - b$.
(d) $a^b - 2$.
(e) $b^a + 1$.
Plug in the answers.
(a) (4 # 2) = 8. The answer should be 14.
(b) (2 # 3) = (2 + 3)3 = 15. The answer should be 6.
(c) (2 # 3) = $(2^2 - 3) = 1$. The answer should be 6.
(d) (4 # 2) = $(4^2 - 2) = 14$. This is the right answer; check (2 # 3) also.
The correct answer is D.

37. In a rectangular coordinate system, what is the square root of the area of a trapezoid whose vertices have the coordinates (2, -2), (2, 3), (20, 2), (20, -2)?

(a) 7.5
(b) 9
(c) 10.22
(d) 12.25
(e) 14
Draw the x and y-axes, then plot the points and connect them.
The area of a trapezoid is $(base_1 + base_2)$ x (height) / 2.
$Base_1 = 5$, $base_2 = 4$, height = 18 thus the area is 9 x 9 = 81.
The answer to the question is the square root of 81, meaning 9.
The correct answer is B.