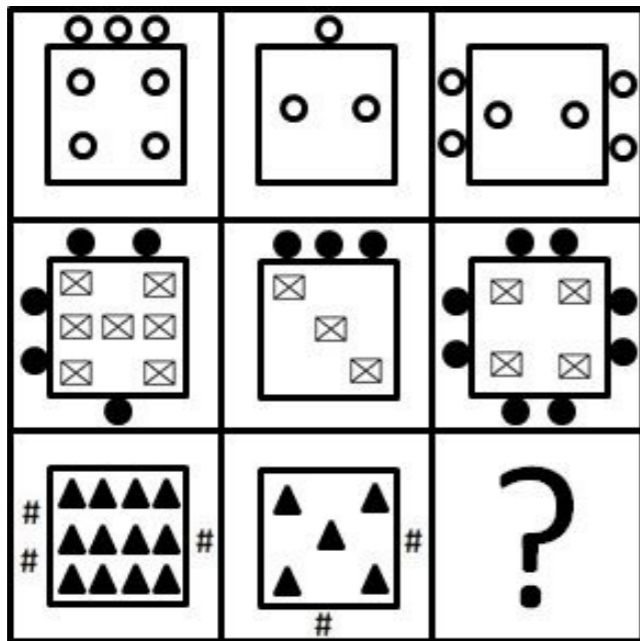
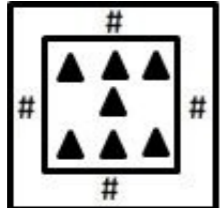
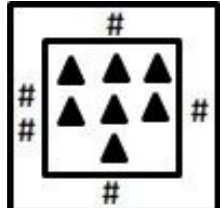
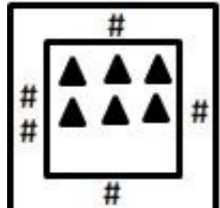
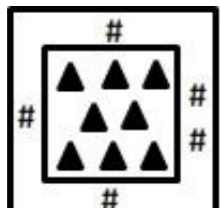
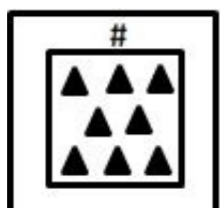
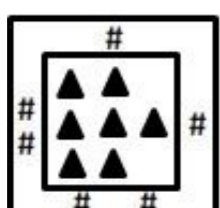


Sample Questions for GAAT for PGDM (BDA)

Question 1:

Find the missing figure, which follows the same pattern / rule and mark it as answer.



Options		Answer
		
		✓
		
		
		
		

Answer Explanation

Column 3 contains the number of outer elements as the sum of the number of outer elements in column 1 and 2; whereas inner elements as difference of the number of inner elements in column 1 and 2

Question 2:

If $\begin{bmatrix} x & 1 & -5 \\ 1 & -1 & 2 \\ 2+x & 3 & 4 \end{bmatrix}$ is singular matrix, then x is:

Options		Answer
13/25		
-13/25		
-25/13		✓
25/13		

Answer Explanation

Singular matrix is a matrix whose determinant is zero; $D=0$

$$D = x((-1)(4) - (3)(2)) - 1((1)(4) - (2)(2 + x)) + (-5)((1)(3) - (-1)(2 + x))$$

$$D = -10x + 2x - 25 - 5x$$

$$D = -13x - 25$$

$$D = 0 \text{ -----}>>> -13x - 25 = 0$$

$$-13x = 25$$

$$x = -25/13$$

Question 3:

If $A = \begin{bmatrix} 4 & -1 \\ -1 & x \end{bmatrix}$ and $A^2 - 6A - 7I = 0$, then X is:

Options		Answer
-2		
10		
-10		
2		✓

Answer Explanation

$$A = (4)(x) - (-1)(-1) = 4x - 1$$

$$A^2 = (4x - 1)^2 = 16x^2 - 8x + 1$$

$$6A = 6(4x - 1) = 24x - 6$$

I is identity matrix which is equal to 1; so $I = 1$

$$7I = 7$$

$$A^2 - 6A - 7I = 0$$

$$(16x^2 - 8x + 1) - (24x - 6) - (7) = 0$$

$$16x^2 - 32x = 0$$

$$16x(x - 2) = 0$$

$$x = 0 \text{ or } 2$$

according to answer choices answer is 2.

Question 4:

If A is a non singular matrix and B is a square matrix, then $\det(A^{-1}BA)$ is equal to:

Options		Answer
$\det(B)$		✓
$\det(A)$		
$\det(A^{-1})$		
$\det(B^{-1})$		

Answer Explanation

$$\det(A^{-1}BA) = \det(A^{-1}) * \det(B) * \det(A)$$

$$= \det(A^{-1}A) * \det(B)$$

$$= \det(I) * \det(B), \text{ where } I \text{ is identity matrix whose determinant is } 1$$

$$= \det(B)$$

Question 5:

If $A = \begin{vmatrix} 3 & 7 \\ 1 & 2 \end{vmatrix}$, then the value of the determinant $|A^{2012}|$ is :

Options		Answer
-1		
1		✓
0		
None of the given options		

Answer Explanation

$$|A^n| = |A|^n \text{ for } n = \text{Natural numbers}$$

$$|A| = (3)(2) - (7)(1) = -1$$

$$|A^{2012}| = |A|^{2012} = (-1)^{2012} = 1$$

Question 6:

The product of three consecutive numbers is 74046. What is the sum of these numbers?

Options		Answer
123		
126		✓
129		
132		

Answer Explanation

Let's assume x , $(x+1)$, $(x+2)$ are three consecutive numbers and their product is 74046.

$$\text{so; } (x) * (x+1) * (x+2) = 74046$$

$$x^3 + 3x^2 + 2x - 74046 = 0$$

on factoring the equation

$$(x - 41)(x^2 + 44x + 1806) = 0$$

means either $(x - 41) = 0$ -----> $x=41$

$$\text{or } (x^2 + 44x + 1806) = 0 \text{ -----> } x = -22 + \sqrt{(-5288)} \text{ and } -22 - \sqrt{(-5288)}$$

so $x = 41$ as the other values are complex numbers.

Now the sum of the numbers would be:

$$41 + 42 + 43 = 126$$

Question 7:

Solve the equations for x and y : $\sqrt{x} + \sqrt{y} = 10$ and $\sqrt{x} - 2\sqrt{y} = 1$

Options		Answer
7, 3		
9, 16		
8, 15		
49, 9		✓

Answer Explanation

first equation - second equations

$$(\sqrt{x} + \sqrt{y} = 10) - (\sqrt{x} - 2\sqrt{y} = 1)$$

$$3\sqrt{y} = 9$$

$$\sqrt{y} = 3 \text{ -----> putting this in equation first -----> } \sqrt{x} = 7$$

$$y = 9, x = 49$$

Question 8:

A sum of \$8.25 is made up of 100 coins, which are either 10 cents or 5 cents. How many 10 cent coins are there?

Options		Answer
65		✓
35		
40		
55		

Answer Explanation

Lets assum there are x 10 cents coin and y 5 cents coins now

total number of coins are 100 means : $x + y = 100$ -----> (1)

total money is \$8.25= 825 cents means : $10x + 5y = 825$ -----> (2)

10 * equation (1) - equation (2)

$$5y = 175$$

$y = 35$, put this in equation (1) $x = 65$

number of 10 cents coins = $x = 65$

Question 9:

Slope of any line is not defined if the line is:

Options		Answer
Parallel to x-axis		
parallel to y-axis		✓
parallel to $x-y = 0$		
parallel to $x+y = 0$		

Answer Explanation

slop of any line = $(Y_2 - Y_1) / (X_2 - X_1)$

so the slop of any line will not be defined if all the points have the same x - coordinates.

Out of the given options only line which is **parallel to the y - axis** have the same x - coordinates for all the points.