








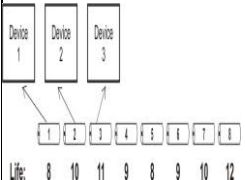




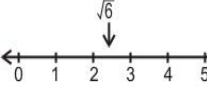
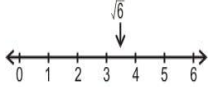
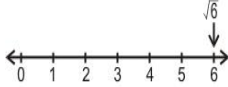
Subject: Mathematics

Q.NO.	Folder Number & Question Code	Topic	Question with Answer Options	Image ( If Any )	Correct Answer (Option - A,B,C,D)	
1	2_11 Mathematics 4467	Number System	Shalini is making triangles with matchsticks from a box. What is the MINIMUM number of matchsticks that she will need to make a triangle with no sides equal? (Each matchstick should form a part of any side of the triangle and no matchstick should be bent or broken)		C	
		Answer Options				
		Option A	Option B	Option C		Option D
		5	6	9		11
2 A	2_11 Mathematics 5323	Number System	<p>Read the information given below to answer the question. Suppose, for all rational numbers <math>x, y</math> and <math>z</math>,</p>  <p>we define <math>\triangle_{x,y,z}</math> as follows:</p>  $= xy - z$ , if $z < y$ and  $= xz - y$ if $y < z$ . <p>What is the value of  ?</p>		D	
		Answer Options				
		Option A	Option B	Option C		Option D

		-3	-2	0	6		
<b>2 B</b>	<b>2_11</b> <b>Mathematics</b>  <b>5324</b>	Number System	Of the following, which will have the same value as ?				<b>C</b>
		Answer Options					
		Option A	Option B	Option C	Option D		
		 <b>A</b>	 <b>B</b>	 <b>C</b>	 <b>D</b>		
<b>3 A</b>	<b>2_11</b> <b>Mathematics</b>  <b>4493</b>	Number System	Answer the question based on the given information.				<b>B</b>
		Ramesh works in a factory control room, where he operates three electronic devices which run on ordinary batteries.			Each device requires 1 battery, which lasts for 8-12 days depending on the battery quality.		
		Ramesh has a stock of 8 new batteries. The number of days each will last (though this is not known to Ramesh) is shown below.			Ramesh puts new batteries in all three devices in the order shown. After this, as batteries run out, Ramesh replaces the old batteries from his stock IN THE SAME ORDER.		
		Which battery will replace battery number 2 in device 2?					
Answer Options							
Option A	Option B	Option C	Option D				
4	5	7	8				

3 B	2_11 Mathematics 4494	Number System	On which day will Ramesh have to buy a new battery?			B	
		Answer Options					
		Option A	Option B	Option C	Option D		
		Day 16	Day 21	Day 27	Day 25		
4	2_11 Mathematics 5297	Number System	One of the numbers below can be written as 2.828427125..... (The pattern of digits does NOT repeat). Which one is it?			B	
		Answer Options					
		Option A	Option B	Option C	Option D		
		$\frac{20}{7}$	$\sqrt{8}$	$2 + \frac{9}{11}$	$\sqrt{56}$		
5	2_11 Mathematics 5299	Number System	Which of the following is the best approximation for the value of $541 \div (0.098)^2$ ? (Hint: You need not actually calculate.)			D	
		Answer Options					
		Option A	Option B	Option C	Option D		
		50	5	5500	55000		
6	2_11 Mathematics 5305	Number System	$2 + \sqrt{3}$ and $2 - \sqrt{3}$ are both irrational numbers. $(2 + \sqrt{3})(2 - \sqrt{3}) = (2)^2 - (\sqrt{3})^2 = 4 - 3 = 1$ . What can be said WITH CERTAINTY about the product of two irrational numbers from the above example? The product of two irrational numbers is			D	
		Answer Options					
		Option A	Option B	Option C	Option D		
		always a rational number.	always an irrational number.	always 1.	not necessarily an irrational number.		

7	2_11 Mathematics 5306	Number System	I start with 1000 and start writing a series of numbers - subtracting 6 every time to get the next number. The series looks like this: 1000, 994, 988, 982, ....and so on.  If the series is continued, which will be the first negative number to appear in it?		C	
		Answer Options				
		Option A	Option B	Option C		Option D
		-6	-4	-2		-1
8	2_11 Mathematics 4455	Number System	What number does the pointer show?		C	
		Answer Options				
		Option A	Option B	Option C		Option D
		9.4	9.54	9.504		9.514
9	2_11 Mathematics 4456	Number System	$8 + 27^{1/3}$ is equal to		C	
		Answer Options				
		Option A	Option B	Option C		Option D
		5	$8^{1/3}$	11		17
10	2_11 Mathematics 4457	Number System	If $160 \times 1.362 = 217.92$ What is the value of $21.792 \div 1.6$ ?		D	
		Answer Options				
		Option A	Option B	Option C		Option D
		0.01362	0.1362	1.362		13.62
11	2_11 Mathematics 5313	Number System	$q$ is a number such that $-q > -2$ . Which of the following statements will also be true?		B	
		Answer Options				
		Option A	Option B	Option C		Option D
		$q = 2$	$q < 2$	$q > 5$		$q > 2$

<b>12</b>	<b>2_11</b> <b>Mathematics</b>  <b>4458</b>	Number System	If a number is divisible by 6 and 10, it must also be divisible by _____			<b>C</b>
		Answer Options				
		Option A	Option B	Option C	Option D	
		4	16	30	60	
<b>13</b>	<b>2_11</b> <b>Mathematics</b>  <b>4460</b>	Number System	On which number line is the position of $\sqrt{6}$ shown correctly?			<b>B</b>
		Answer Options				
		Option A	Option B	Option C	Option D	
		 <p><b>A.</b></p>	 <p><b>B.</b></p>	 <p><b>C.</b></p>	 <p><b>D.</b></p>	