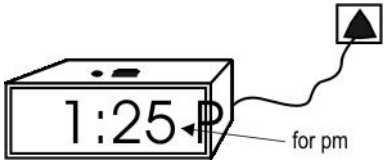
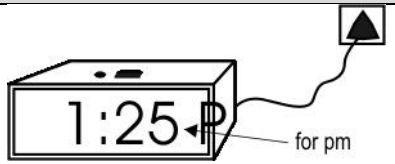
Set-16

Subject: Mathematics

Grade: 8th

S.N	Folder Number & Question Code	Topic	Question with Answer Options	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	**2_10 Mathematics 5875**	PLAYING WITH NUMBERS	Answer the question based on the given information. The digital clock shown below displays the time from 12:00 to 11:59. At any time, the SUM OF THE DIGITS displayed can be calculated. For example, the sum of the digits at 1:25 is 1+2+5 = 8. At 10:25, it is 1+0+2+5 = 8. At what time will the sum of the digits in the time displayed be MAXIMUM?		D

Answers option			
Option A	Option B	Option C	Option D
12:00:00	11:59:00 AM	10:59:00 AM	9:59:00 AM

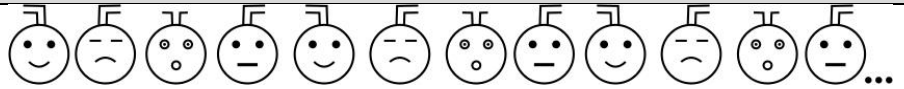
S.N	Folder Number & Question Code	Topic	Question with Answer Options	Image (If Any)	Correct Answer (Option-A,B,C,D)
2	**2_10 Mathematics 5876**	PLAYING WITH NUMBERS	Answer the question based on the given information. The digital clock shown below displays the time from 12:00 to 11:59. At 1:01, 2:22, 3:53, etc. the time reads the same FORWARDS as well as BACKWARDS. From 12:00 noon to 11:59 pm, how many times will the clock show a time reading the same backwards and forwards? The clock does not display a zero before hours that do not require it, hence 1:01 should be counted, while 1:10 should not.		C

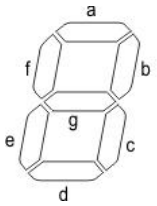
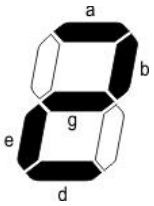
Answers option			
Option A	Option B	Option C	Option D
12	24	57	71

<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>3</td><td rowspan="2">2_10
Mathematics
5877</td><td>PLAYING WITH NUMBERS</td><td>Latif's Maths teacher asks him to think of any whole number from 1 to 10. She then asks him to do the following:
1. Double this number.
2. Add 4 to the result.
3. Multiply the sum by 5.
If we call the number Latif thinks of N, the number he gets at the end will be</td><td></td><td>A</td></tr>
<tr><td colspan="4"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>(N + 2) × 10</td><td>N + 4 × 2 × 5</td><td>(N × 2) + (4 × 5)</td><td>10N + 4</td></tr>
</table></td></tr>
</table>

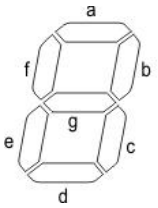
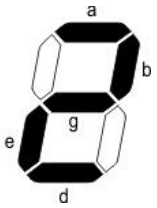
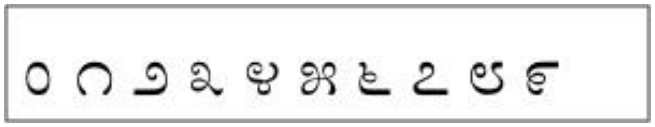
S.N	Folder Number & Question Code	Topic	Question with Answer Options	Image (If Any)	Correct Answer (Option-A,B,C,D)
4	**2_10 Mathematics 5879**	PLAYING WITH NUMBERS	A few drops of water fell on Pratik's phone diary and wiped out most of the digits of his friend's phone number. This is what remains: The only other thing Pratik remembers is that the sum of any three consecutive digits in the number was 17.Which of these is the digit in the thousand's place in the number?		B

Answers option			
Option A	Option B	Option C	Option D
3	6	7	8

<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td rowspan="2">5</td><td rowspan="2">2_10
Mathematics
5882</td><td>PLAYING WITH NUMBERS</td><td>If the above pattern of faces continues, what will the 1001st face be?</td><td>  </td><td>D</td></tr>
<tr><td colspan="4"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>A </td><td>B </td><td>C </td><td>D </td></tr>
</table></td></tr>
</table>

S.N	Folder Number & Question Code	Topic	Question with Answer Options	Image (If Any)	Correct Answer (Option-A,B,C,D)
6	**2_10 Mathematics 5883**	PLAYING WITH NUMBERS	Digital displays are often made using 7-segment Light Emitting Diodes (LEDs)like the one shown below: Depending on which of the seven segments called a, b, c.. g gets power, different numbers or letters are displayed. For example, if segments a, b, d, e and g are lit, the number 2 is displayed (shown above, right side figure). Study the above figures carefully and answer the question. Which segments must receive power if the letter F is to be displayed?	 	B

Answers option			
Option A	Option B	Option C	Option D
a, b, d, f	a, e, f, g	c, d, e, g	b, c, d

S.N	Folder Number & Question Code	Topic	Question with Answer Options	Image (If Any)	Correct Answer (Option-A,B,C,D)
7	**2_10 Mathematics 5884**	PLAYING WITH NUMBERS	Digital displays are often made using 7-segment Light Emitting Diodes (LEDs)like the one shown below: Depending on which of the seven segments called a, b, c .. g gets power, different numbers or letters are displayed. For example, if segments a, b, d, e and g are lit, the number 2 is displayed (shown above, right side figure). Study the above figures carefully and answer the question. The number of LIT segments in 1 is 2. In 2, the number of lit segments is 5. Thus the INCREASE in the number of lit segments is 3. Between which two numbers does the number of lit segments INCREASE THE MOST?	  	D

Answers option			
Option A	Option B	Option C	Option D
0 and 1	1 and 2	4 and 5	7 and 8

<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>8</td><td rowspan="2">3_18 Mathematics 3357</td><td>PLAYING WITH NUMBERS</td><td>Ananth ran a 4 km stretch at an average speed of 10 km an hour. If he started his run at 5:00 AM, at what time did he finish?</td><td></td><td>A</td></tr>
<tr><td colspan="5"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>5:24 AM</td><td>5:40 AM</td><td>7:25 AM</td><td>7:30 AM</td></tr>
</table></td></tr>
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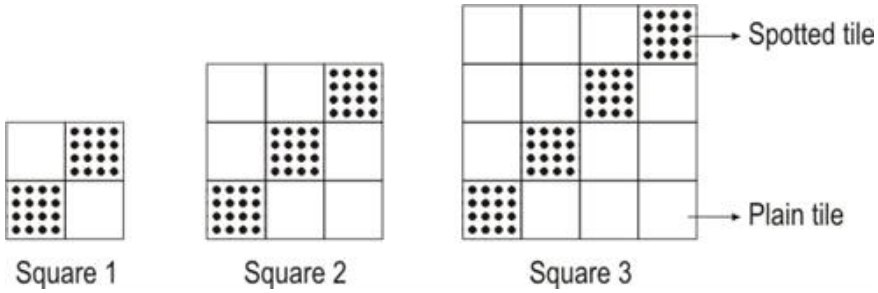
<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>9</td><td rowspan="2">3_18
Mathematics
3361</td><td>PLAYING WITH NUMBERS</td><td>The sum of three numbers is even. If the first number is odd, what can be said about the other two?</td><td></td><td>B</td></tr>
<tr><td colspan="5"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>Both of them are odd</td><td>One of them is even and the other odd</td><td>Both of them are even</td><td>We can't say for sure</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>10</td><td rowspan="2">3_18
Mathematics
3370</td><td>PLAYING WITH NUMBERS</td><td>7.32×10^{-2} is nearly equal to</td><td></td><td>D</td></tr>
<tr><td colspan="5">
<table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>-140</td><td>700</td><td>0.007</td><td>0.07</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>11</td><td rowspan="2">3_18
Mathematics
3378</td><td>PLAYING WITH NUMBERS</td><td>See the pattern of plain tiles and spotted tiles in the squares below to answer question.
What will be the TOTAL number of spotted tiles needed to complete the patterns up to the sixth square? (including the first three)</td><td> 
</td><td>B</td></tr>
<tr><td colspan="5"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>20</td><td>27</td><td>30</td><td>36</td></tr>
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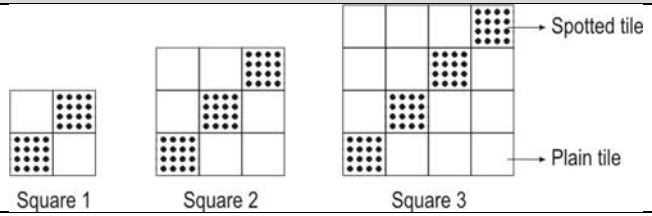
<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>12</td><td rowspan="2">3_18
Mathematics
3379</td><td>PLAYING WITH NUMBERS</td><td>See the pattern of plain tiles and spotted tiles in the squares below to answer the question.
How many PLAIN tiles will be needed for the twentieth square?</td><td> 
</td><td>C</td></tr>
<tr><td colspan="5"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>21</td><td>400</td><td>420</td><td>441</td></tr>
</table></td></tr>
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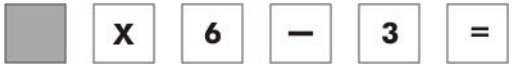
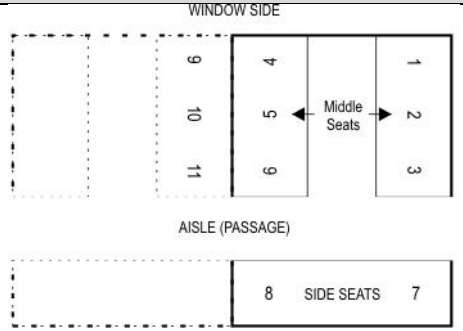
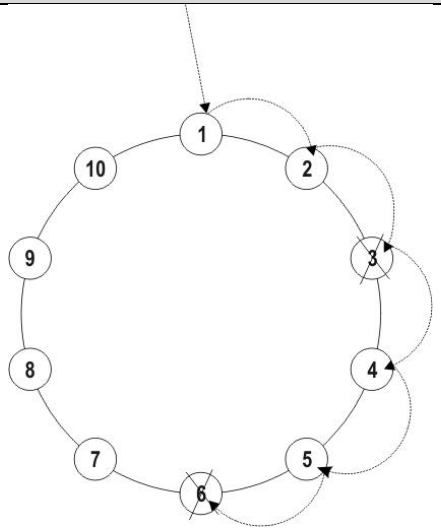
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>13</td><td rowspan="2">3_18
Mathematics
3380</td><td>PLAYING WITH NUMBERS</td><td>Abdul pressed 6 buttons on his calculator and got the result as 27. The buttons that he pressed are shown below (in order). The first button is hidden:
Which button did Abdul press first?</td><td>  </td><td>C</td></tr>
<tr><td colspan="4"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>9
A.</td><td>6
B.</td><td>5
C.</td><td>4
D.</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>S.N</th><th>Folder Number & Question Code</th><th>Topic</th><th>Question with Answer Options</th><th>Image (If Any)</th><th>Correct Answer (Option-A,B,C,D)</th></tr>
<tr><td>14</td><td rowspan="2">1_2
Mathematics
6906</td><td>PLAYING WITH NUMBERS</td><td>Sleeper Class coaches of the Indian Railways have a seat numbering arrangement as shown below.
Each 'cubicle' seats 8 people as shown.
Ramesh and his parents have 3 tickets and their seat numbers are 29, 30 and 31. What are their seats?</td><td> 
</td><td>B</td></tr>
<tr><td colspan="4"><table>
<tr><th colspan="4">Answers option</th></tr>
<tr><td>Option A</td><td>Option B</td><td>Option C</td><td>Option D</td></tr>
<tr><td>One aisle, one window, one middle seat.</td><td>One middle, one aisle and one side seat.</td><td>One aisle and two side seats.</td><td>Two side seats and one window seat.</td></tr>
</table></td></tr>
<tr><td></td><td></td><td colspan="4"></td></tr>
</table>

S.N	Folder Number & Question Code	Topic	Question with Answer Options	Image (If Any)	Correct Answer (Option-A,B,C,D)
15	**1_2 Mathematics 6928**	PLAYING WITH NUMBERS	The question is based on the following: 10 friends are playing a game. They have numbered themselves 1 to 10 and are standing in a circle. Now every third person starting from number 1 does the following: He comes forward, tells a joke and leaves the circle. After this, again the third person from the people remaining in the circle does the same, and so on till there is only one person left in the group. Thus, first No. 3 leaves then No. 6, etc. After No. 6, who will be the next 2 people to leave?		C

Answers option			
Option A	Option B	Option C	Option D
No. 9 and No. 12	No. 8 and No. 1	No. 9 and No. 2	No. 9 and No. 4