शिक्षा का अधिकार
सर्व शिक्षा अभियान
सब पढ़ें सब बढ़ें

Second Terminal Evaluation - 2016
MATHEMATICS

Class: VIII

Time: 1½ hours
Score: 40

Instructions
- Answer the questions after reading and understanding all of them.
- 15 minutes are given as **cool off time** and this time is to be spent for reading the questions.
- Attempt questions according to the instructions.
- In the 'OR' questions, only one question is to be attended.

1. The acute angles of a right triangle are in the ratio 1 : 5. Find the measurement of those angles.

   (2)

2. Draw a rectangle having sides 8 centimetre and 6 centimetre. In this figure draw a rhombus having diagonals 6 centimetre and 8 centimetre. (3)

3. Babu deposited a certain amount in a bank which gives 10% simple interest annually. After 2 years he got 400 rupees as interest. If he deposited the same amount in another bank giving 10% compound interest annually, how much more interest he would have got? (3)

4. The two angles of a parallelogram are in the ratio 5 : 13. If the bigger angle is halved, what will be the ratio of the angles of the new parallelogram obtained? (3)

   OR

   The number of boys and girls in a class are in the ratio 4 : 7. There are 15 more girls than boys. Find the number of total students in the class.

5. Find out the largest product of each pair below, without actual multiplication.

   i) 36×64, 39×61

   ii) 47×53, 42×58

   iii) 7.3×2.7, 6.4×3.6 (3)

6. Look at this pattern :

   $$1 \times 5 = 3^2 - 4$$
   $$2 \times 6 = 4^2 - 4$$
   $$3 \times 7 = 5^2 - 4$$

   i) Write the next two lines

   ii) Explain the general principle you arrived using algebra. (4)

   OR

   Look at this pattern :

   $$50^2 - 50 - 49 = 49^2$$
   $$49^2 - 49 - 48 = 48^2$$
   $$48^2 - 48 - 47 = 47^2$$

   i) Write the next two lines

   ii) Explain the general principle you arrived using algebra.

7. Mini deposited 40,000 rupees in a bank which gives 12% interest, compounded annually. After 2 years she withdrew 20,176 rupees. How much amount would she get back after one more year. (4)

8. The sides of a quadrilateral are 4cm, 5cm, 6cm and 7cm. One of its diagonal is 8cm. Draw its rough figure and construct it. (4)

9. Jose deposited 2,00,000 rupees in a bank which pays 8% interest, compounded annually. Mohanan deposited same amount in a bank where interest is compounded half-yearly at 8% annual rate. Who gets more amount as interest? How much? (4

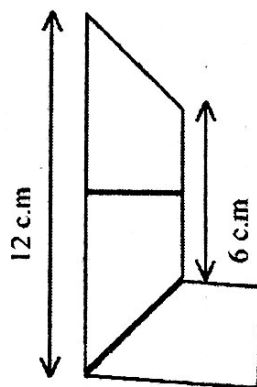10. In the calendar, 9 numbers are marked in a square and wrote a pattern as shown below.

December 2016

S	M	T	W	T	F	S
				1	2	3
4	⑤	6	⑦	8	9	10
11	12	13	14	15	16	17
18	⑲	20	㉑	22	23	24
25	26	27	28	29	30	31

$$21 \times 5 = 105 = 13^2 - 8^2$$
$$19 \times 7 = 133 = 13^2 - 6^2$$

(i) From the calendar write another square having 9 numbers in your answer paper.

(ii) Frame the number relation as shown above.

(iii) Explain using algebra, why this number pattern comes true for these numbers. (5)

11. The figure shown below is drawn using 3 equal trapeziums.

Draw this figure using the given measurements. (5)