

INDIAN SCHOOL SOHAR
FORMATIVE ASSESSMENT- 2
MATHEMATICS

Date: 09-08-2015
Class: IX

Time: 40mnts
Marks: 20

General Instructions:

- All questions are compulsory.
 - Section A comprises 3 questions of 1 mark each.
 - Section B comprises 2 questions of 2 marks each.
 - Section C comprises 3 questions of 3 marks each.
 - Section D comprises 1 question of 4 marks.
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SECTION A

1. If two adjacent angles on a straight line are in ratio 6:3, then find the measure of greater angle?
2. If $\angle 1 = \angle 4$, $\angle 3 = \angle 2$ and $\angle 2 = \angle 4$ then is $\angle 1 = \angle 3$. Give reason.
3. One-third of an angle is equal to its supplement. Find the measure of this angle.

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SECTION A

1. If two adjacent angles on a straight line are in ratio 4:6, then find the measure of smaller angle?
2. If $\angle 1 = \angle 4$, $\angle 3 = \angle 2$ and $\angle 2 = \angle 4$ then is $\angle 1 = \angle 3$. Give reason.
3. One-half of an angle is equal to its supplement. Find the measure of this angle.

SECTION B

4. If C is the mid-point of \overline{AB} . Prove that every line segment has one and only one mid-point.
5. Factorise $27p^3 - \frac{1}{216} - \frac{9}{2}p^2 + \frac{1}{4}p$

SECTION C

6. If $p = 2 - a$, then prove that $a^3 + 6ap + p^3 - 8 = 0$.
7. Prove that sum of the angles of a triangle is 180° .
8. Ray OC stands on the line AB, ray OL and ray OM are angle bisectors of $\angle AOC$ and $\angle BOC$ respectively. Prove that $\angle LOM = 90^\circ$.

SECTION D

9. If $(x + \frac{1}{x}) = 5$, then evaluate $x^6 + \frac{1}{x^6}$

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SECTION B

4. If R is the mid-point of \overline{PQ} . Prove that every line segment has one and only one mid-point.
5. Factorise $27m^3 - \frac{1}{216} - \frac{9}{2}m^2 + \frac{1}{4}m$

SECTION C

6. If $q = 2 - c$, then prove that $q^3 + 6qc + c^3 - 8 = 0$.
7. Prove that sum of the angles of a triangle is 180° .
8. Ray OP stands on the line AB, ray OR and ray OL are angle bisectors of $\angle AOP$ and $\angle BOP$ respectively. Prove that $\angle ROL = 90^\circ$.

SECTION D

9. If $(z + \frac{1}{z}) = 5$, then evaluate $z^6 + \frac{1}{z^6}$

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