



ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution



Sub: Arithmetic
Duration: 40 Min

Class: 7
Worksheet Solutions 57
EXPONENTS

Date: 18.07.20
Full Marks: 15

Choose the correct options:

- At the first stage of a nuclear fission reaction 3 neutrons are produced. How many neutrons are produced at the 12th stage? Assume the reaction is an uncontrolled chain reaction.
 - 3
 - 3×12
 - 12^3
 - 3^{12}
- Bacteria divide every 20 minutes to give 2 in 20 min, 4 in 40 min and so on. How many bacteria will be present in a 6 hour old bacterial culture?
 - 2^5
 - 2^6
 - 2^{12}
 - 2^{18}
- How many angstrom (10^{-10} m) are there in 1 km?
 - 10^{13}
 - 10^7
 - 10^{-13}
 - 10^{-7}
- There are 40 students in Ritaja's class who are each asked to distribute invites to 4 people to the school concert. Each invite admits 4 people. How many are invited to the event?
 - 32
 - 64
 - 160
 - 640**
- Rishav collects pebbles. Each day he collects twice as many pebbles as the day before. How many pebbles does he have after a week?
 - 2^8
 - 2^6
 - 2^9
 - 2^7**
- Light from the sun reaches the earth in 8 min. If the speed of light is 3×10^8 ms⁻¹, find the distance of the earth and the sun in kilometres.
 - 1.44×10^8**
 - 2.88×10^5
 - 1.44×10^8
 - 2.88×10^5
- Every hour a cell divides into two. How many daughter cells can be formed from a single parent cell at the end of a day?
 - 2^{12}
 - 2^{24}**
 - 2^8
 - 2^{60}

8. Express 1 m^3 in millilitre.
- 10^3
 - 10^{-3}
 - 10^6**
 - 10^{-6}
9. A single electron has a charge of magnitude 1.6×10^{-19} coulomb, where coulomb is the unit of charge. How many electrons constitute a charge of one coulomb?
- 6.25×10^{18}**
 - 1.6×10^{18}
 - 1.6×10^{-19}
 - 6.25×10^{19}
10. A cubical graphene cell has sides 2×10^{-10} m each. Find the volume of such a graphene cell in cubic metre.
- 6×10^{-10}
 - 8×10^{-30}**
 - 6×10^{-30}
 - 8×10^{-10}
11. The population of a certain town triples every decade. By how much will the population increase in 50 years?
- 3^5 times**
 - 3^6 times
 - 3^4 times
 - 3^7 times
12. If instagram followers double every week, how much time will it take for a new profile to gain 1000 likes?
- 10**
 - 9
 - 7
 - 5
13. On Monday Renu tells a secret to 3 people. The next day each of them tell 3 people more. If this pattern continues how many people other than Renu knows the secret by next Monday?
- 3^6
 - 3^8
 - 3^5
 - 3^7**
14. How many square metres are there in a hectare?
- 10^4**
 - 10^5
 - 10^6
 - 10^8
15. The earth has 1.4×10^9 cubic kilometre of sea water. If average salt concentration is 3.5%, find the volume of salt dissolved in it.
- 4.9×10^9
 - 4.9×10^7**
 - 9.8×10^9
 - 9.8×10^7