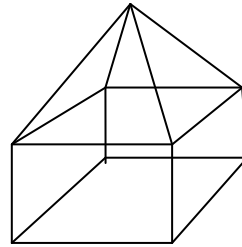
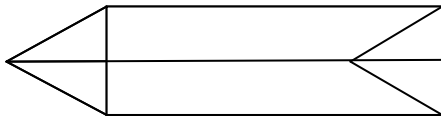


SECTION-C

14. Mr. Shastri borrowed a sum of ₹ 4000 from Mr. Jacob at the rate of 10% p.a. under simple interest. Immediately Mr. Shastri gave the money to Mr. Joshi at the same rate under compound interest compounded half yearly. Find the profit of Mr. Shastri in doing so after one year. (3)
15. Using identities evaluate: (3)
a) $(10.2) \times (9.8)$
b) 102×101
16. Earth is dug out to a depth of 15m from a circular plot of land of radius 7m. The earth is then spread out evenly on an adjacent rectangular plot of dimensions 11m x 7m. Find the height of the earth on the rectangular plot. (3)
17. Neha borrowed ₹ 24000 from a bank to buy a scooter. If the rate of interest is 10% p.a. compounded annually, what payment will she have to make after 2 years 3 months? (3)
18. a) Verify Euler's formula in the given polyhedrons. (3)
(i) (ii)



- b) A polyhedron has 20 faces and 12 vertices. How many edges does this polyhedron have?

SECTION-D

19. a) What sum will become ₹ 5408 after 2 years at 4% per annum, when the interest is compounded annually? (4)
b) What sum will become ₹ 44100 in 1 year at the rate of 10 % per annum, when the interest is compounded half yearly?
20. Using suitable identities multiply the following: (4)
a) $(2a - 5b)(2a - 5b)$
b) $(b - 2)(b - 4)$
c) $(p + 4q)(p + 4q)$
d) $(x^2 + 4)(x^2 - 4)$
21. a) Find the area of the trapezium, if its parallel sides are 5cm and 7cm long and the distance between them is 9cm. (4)
b) Find the area of a rhombus, each side of which measures 20 cm and one of the diagonals is 24cm.
22. Simplify the following: (4)
a) $(2^{-1} \div 5^{-1})^2 \times \left(\frac{-5}{8}\right)^{-1}$.
b) $\frac{p^{-4} \times q^3 \times r^{-2} \times s^6}{r^3 \times p^{-1} \times s^0 \times q^{-2}}$