APEEJAY SCHOOL, PITAM PURA
SA1 EXAMINATION 2016
CLASS VII
MATHEMATICS

**Time : 3 hrs**   **Max. Marks: 80**
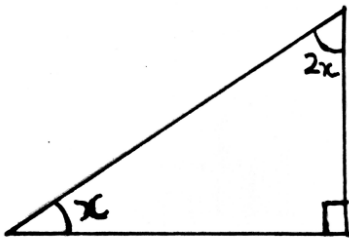
GENERAL INSTRUCTIONS:
   A. **All questions are compulsory.**
   B. **Ques. 1 to 5 carry 1 mark each, Ques. 6 to 15 carry 2 marks each, Ques. 16 to 25 carry 3 marks each and Ques. 26 to 30 carry 5 marks each.**
   C. **Draw neat figures wherever required.**

   1.   Find (-1)x(-5)x(-4)x(-6)
   2.   Find 1/2 of 24.
   3.   Which angle is equal to its supplement?
   4.   Express (-44/ 72) in the simplest form.
   5.   Express 675 as the product of its prime factors.
   6.   Solve using properties: -41 x 102
   7.   Express 7 rupees 7 paisa as rupees using decimals.
   8.   Samira purchased 3 ½ kg apples and 4 ¾ kg oranges. What is the total weight of fruits purchased by her?
   9.   In the given figure, the arms of the two angles are parallel. If angle ABC = 70^0, then find angle DEF.
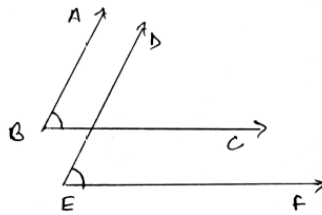
   10.   Find the value of x in the given figure:

   11.   In ΔABC, AB =AC. If angle A = 40 ^{0}, find angle B.

12. If ΔDEF is congruent to ΔBCA, write the parts of ΔBCA that correspond to
    a) angle E
     b) side EF
    c) angle F
    d) side D

13. Subtract the sum of (-3/4)and ½ from 7/8.

14. Using laws of exponents , simplify and write the answer in the exponential form:

    a) $(3^0 + 2^0) \times 5^0$
    b) $(2^{20} \div 2^{15}) \times 2^3$

15. Express the number in the standard form:

    a) 1,27,56,000
    b) 1,027,000,000

16. In a class test containing 15 questions, 4 marks are given for every correct answer and (-2) marks are given

    for every incorrect answer. Renu attempts all questions but only 9 of her answers are correct.
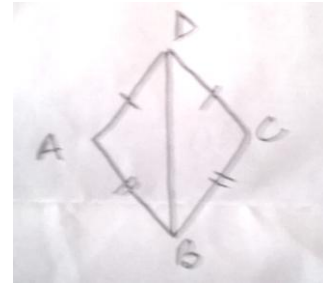
    What is her total score?

17. A tree is standing by the side of a building. $1/3^{rd}$ of the height of the tree is above the building's height.

    If the building is 12m high, find the height of the tree.

18. Find the value of x in the figure:
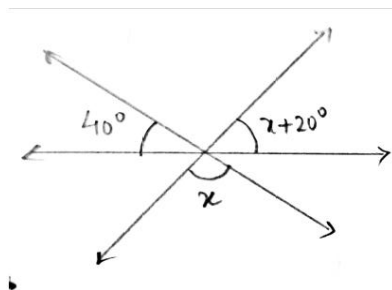
19. ABCD is a quadrilateral. Prove that AB+BC+CD+DA > AC+BD?

20. In the figure, AD = CD and AB =CB

    i. State the three pairs of equal parts in ΔABD and ΔCBD
    ii. Is ΔABD congruent to ΔCBD? Why or why not?
    iii. Does BD bisect angle ABC? Give reasons.

21. Simplify: $(4^5 \times a^8 b^3) / (4^5 \times a^5 b^2)$
22. By what number should we multiply 7/52 to get the product (-3/13)?
23. ABC is an isosceles triangle with AB = AC and AD is one of its altitudes.

    i. State the three pairs of equal parts in ΔADB and ΔADC.
    ii. Is ΔADB congruent to ΔADC? Why or why not?
    iii. Is angle B = angle C? Why?
    iv. Is BD = CD? Why?

24. Howmuch is 28km 60m less than 42km.
25. You want to show that ΔART is congruent to ΔPEN by the SSS congruence condition. Write each of the

    corresponding parts of the triangle which are equal. Also state the SSS congruence condition.

26. Find the perimeter of the rectangle whose length is 40cm and diagonal is 41cm.
27. In this figure p II q, Find the value of x and y.
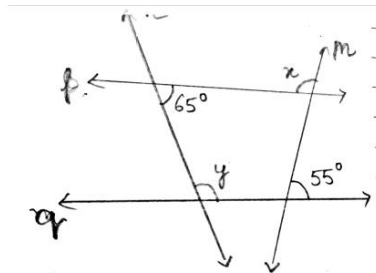
28. Show that the diagonal of a rectangle divides it into two congruent triangles.
29. Simplify: $(25 \times 5^2 \times t^8) / (10^3 \times t^4)$
30.   i. Solve: $[(-6) + 5] \div [(-2) + 1]$

    ii. Solve: -41 × 102 using distributive property .