Name :   Subject : Maths
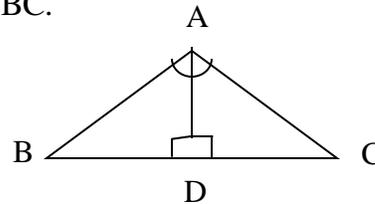Class: VII   Date:
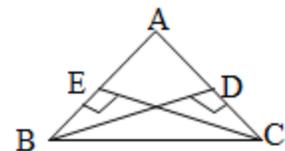
1) Divide Rs. 1250 between Aman and Amit in the ratio 2 : 3.

2) The monthly salary of an accountant is Rs. 15625. If he gets an increase of 12%, find his new salary.

3) Find the value of n when $8 \times 2^{n+2} = 32$.

4) If $A = 3x^2 - 7x - 8$, $B = x^2 + 8x - 3$ and $C = -5x^2 - 3x + 2$, find $A - B + C$.

5) In the given figure, AD bisects $\angle A$ and AD $\perp$ BC.

   a)   Is Δ ADB $\cong$ Δ ADC?

   b)   State the conditions of congruency.

6) A farmer borrowed Rs. 2400 at an interest of 12% per annum. At the end of $2\frac{1}{2}$ years, he cleared his account by paying Rs. 1200 and a cow. Find the cost of the cow.

7) A military camp has provisions for 630 men to last for 25 days. How many men must be transferred to another camp so that the food lasts for 30 days?

8) A rectangular grassy plot is 112m long and 78m broad. It has 2.5m wide gravel path all around it on the inside. Find the area of the path and the cost of constructing it at Rs. 120 per m^2.

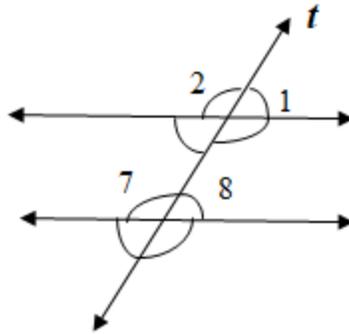9) In the given figure, BD and CE are altitudes of Δ ABC and BD = CE.

   a)   Is Δ BCD $\cong$ Δ CBE?

   b)   State the three pairs of matching parts you have used to answer.

10) Simplify: $\dfrac{10 \times 5^{n+1} + 25 \times 5^{n}}{3 \times 5^{n+2} + 10 \times 5^{n+1}}$

   a) Add: $-5x^6 + 3x^4 - 4x^3$, $9x^6 + 4x^4 + 20x^3$, $-3x^6 - 7x^4 + x^3$.

   b) If $x = 3$, $y = 4$, find the value of $x^3 + y^3 + 3xy^2 + 3x^2y$.

11) In the given figure, l ∥ m and t is a transversal. If ∠ 1 and ∠ 2 are in the ratio 5 : 7, find the measure of all the remaining angles.

12) On selling a computer for Rs. 24,480, a dealer loses 4%. For how much should he sell it to gain 4%?

13) Find the area of a rhombus each side of which measures 20cm and one of whose diagonals is 24cm

14) A circular grassy plot of land of diameter 42m has a path of wide 3.5m running around it on the outside. Find the cost of gravelling the path at Rs. 4 per square metre.

15) Divide Rs. 12000 into two parts such that the simple interest on the first part for 2 years at 6% per annum is equal to the simple interest on the second part for 3 years at 8% per annum.

16) Mr. Rohan purchased a video for Rs.20000 and a television for Rs. 30000. On the video he lost 5% and on the television he gained 8%. Find his total gain or loss percent.

17) Two paths each of width 2m, are running perpendicular to each other in the centre of a rectangular park 120m by 65m. Find the area of the remaining park.

18) In a hospital, the monthly consumption of milk of 60 patients is 1350 litres. How many patients can be accommodated in the hospital if the monthly ration of milk is raised to 1710 litres, assuming that the quota per head remains the same?

19) Find the number whose 45% is 810.