

Greenlawns School Worli
Maths
Final Examination

Std : VII
Date: 17/2/16

Marks: (80)
Time : 1½ hrs.

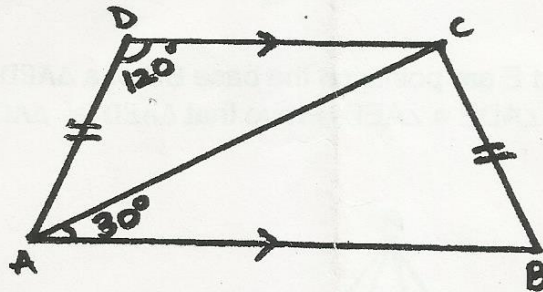
Q.1a Find $(2x + 3y)^2$ using $(a + b)^2$ (3)

b. Three angles of a heptagon are 110° , 145° and 165° . If the remaining four angles are equal, find the measure of each of the equal angles. (3)

c. The simple interest on Rs.5800 at certain rate is Rs 2610 for 3years. Find the amount received on Rs.6600 at the same rate of interest after $1\frac{1}{2}$ years. (4)

Q.2a. Factorise: $m^2 - n^2 - p^2 + 2np$ (3)

b. ABCD is an isosceles trapezium in which $BC = AD$. $\angle CAB = 30^\circ$ and $\angle ADC = 120^\circ$ find $\angle ACB$ and $\angle ABC$. (3)

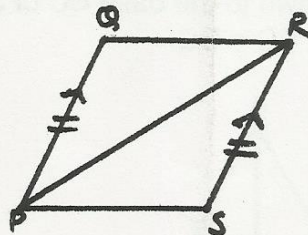


c. A rectangular field is to be fenced with a triple wire fencing. The length and breadth of the field are 1.2km and 800m. Find the cost of fencing, if the cost of wire is Rs 32 per meter and labour cost is Rs.1650. (4)

Q.3a $\frac{3m}{4} + 3 = 18$ solve the equation (2)

b. Simplify: $\frac{a+2}{6} - \frac{2a-1}{3} - \frac{a-5}{2}$ (3)

c. In the given fig $PQ = SR$ and $PQ \parallel SR$. Prove that $\triangle PSR \cong \triangle RQP$ (3)



d. Factorise: $4x^2 + 4x + 1$ (2)

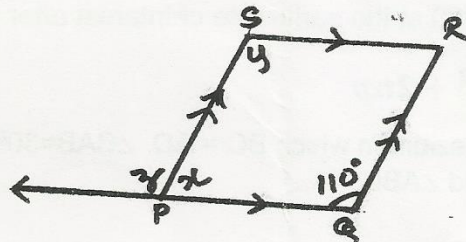
Q.4a A wooden box 2m long, 68cm wide and 30cm high is packed with plastic blocks 10cm long, 8cm broad, and 5cm high. How many blocks are there in a box? (4)

b. Find the simple interest on Rs.7300 from 11th may 2005 to 14th September 2005 at 6% per annum. (4)

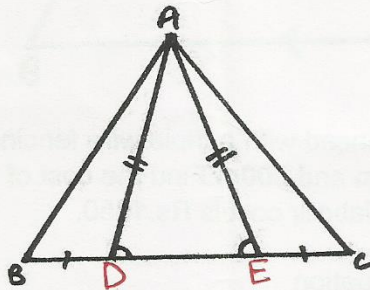
c. Using $(a - b)^2$ find the square of $2x^2 - \frac{1}{3x^2}$ (2)

Q.5a. Solve: $\frac{x}{2} + \frac{x}{3} = 15$ (3)

b. In the adjoining figure, PQRS is a parallelogram, Find the values of x, y, z (3)



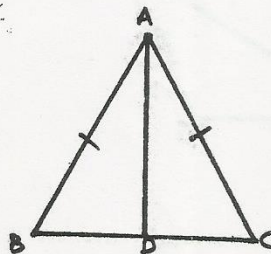
c. In the given figure D and E are points on the base BC of a ΔAED such that $BD = CE$, $AD = AE$ and $\angle ADE = \angle AED$. Prove that $\Delta AED \cong \Delta ACD$ and ΔABC is an isosceles Δ (4)



Q.6a Without actual multiplication find the value of 41×39 (3)

b. A suitcase measures $80\text{cm} \times 48\text{cm} \times 24\text{cm}$, find the surface area of the suitcase. (3)

c. Prove that perpendicular. AD drawn to the base BC of an isosceles ΔABC from the vertex A bisects BC i.e. $BD = DC$ (4)



Q.7a Factorize: $15x^4 + 3x^2 - 18$ (3)

b. A sum of money doubles itself in 6 yrs. What is the rate of interest? (3)

c. Simplify: $\frac{6x^2y}{5ab^2} \div \frac{18xy}{25a^2b^2}$ (2)

d. Find the square of 93 using an identity (2)

Q.8a Simplify: $\frac{x^2+5x}{x^2-9} - \frac{7x+3}{x^2-9}$ (3)

b. Construct a quadrilateral PQRS in which PQ = 6.5cm QR = 6cm, RS = 5.8cm, SP = 5.4cm and $\angle R = 120^\circ$ (5)

c. Solve: $3(2a - 1) + 5 = 14$ (2)
