Pune Jilha Ganit Adhyapak Mandal
&
Brihanmumbai Ganit Adhyapak Mandal

GANIT PRABHUTWA EXAMINATION (Level-1)

Time : 3 Hours

Date : 16.12.12 **Std. VIII** **Total Marks : 100**

N.B. : Proper procedure and explanation is necessary.

1. Solve **12**

a) Simplify : $(16m - 9n) - (7m - 12n)$

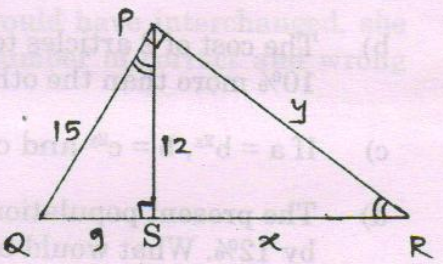
b) Find the ratio of 2.5 kg to 1.5 gm.

c) Simplify : $\sqrt[5]{3^2} \times \sqrt{3}$

d) Find x, if measures of angles in linear pair are $(x + 35)^0$ and $(2x - 50)^0$

e) Factorise : $m^2 - 25m + 154$

f) In the adjacent figure,
$\Delta PQR \sim \Delta SQP$. Find x and y
from the information given in the figure.

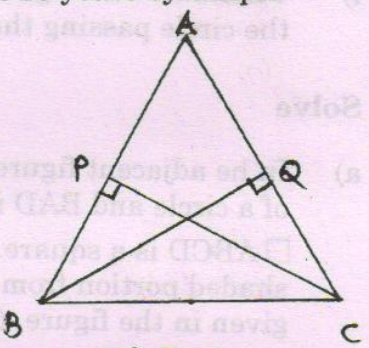


2. Solve **15**

a) A 240 m long train is running at a speed of 48 km/hr. Find the time it takes to cross a pole beside its track.

b) At what rate a sum of money will be tripled in 20 years by simple interest?

c) In the adjacent figure,
if seg CP ≅ seg BQ seg CP ⊥ side AB
and seg BQ ⊥ side AC
prove that $\Delta PBC \cong \Delta QCB$



d) Find the fourth root of 38416.

e) Measure of an exterior angle of a regular polygon is 45^0. Find

i) the number of sides of it

ii) the number of diagonals of it

iii) the sum of measure of all interior angles of it

3. **Solve** 24

a) The length of chord of a circle and its radius are 48 cm and 26cm respectively. Find the distance of the chord from the centre of the circle

b) The average price of 20 toys is Rs. 250. The average price of 12 toys of them is Rs. 235. What is the average price of the remaining toys?

c) If $(a + b)^2 = 64$ and $(a - b)^2 = 4$, then find the value of $4ab\ (a^2 + b^2)$.

d) Find the smallest 4 digit number which is completely divisible by 28, 35 and 42.

e) In a class, the number of girls is less than the number of boys by 20% of the total number of students in the class. What is the ratio of the number of boys to girls?

f) Find the square root of 477.4225 by division method.

4. **Solve** 24

a) Factorise : $(x^2 + 8x)(x^2 + 8x + 5) - 14$.

b) The cost of 2 articles together is Rs. 2226. If the cost of one of them is 10% more than the other, find the cost price of each.

c) If $a = b^{2x}$, $b = c^{2y}$ and $c = a^{2z}$ then find the value of xyz.

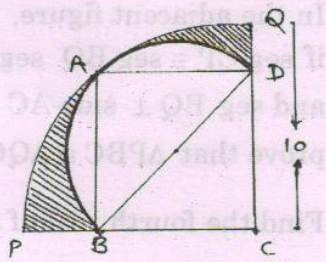
d) The present population of a town is 4,80,000. Every year it increases by 12%. What would be the population of the town after 2 years?

e) Find the two numbers which differ by 85 and the reduced form of their ratio is $\frac{3}{8}$

f) Construct rectangle IJKL : l (IJ) = 3.8cm, and l (JK) = 4.7cm. Construct the circle passing through all the vertices of □ IJKL.

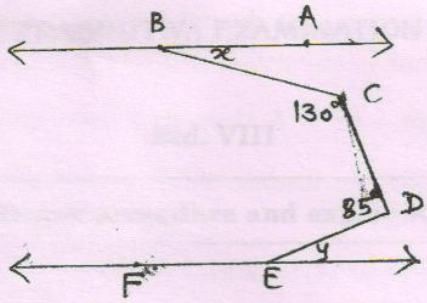
5. **Solve** 25

a) In he adjacent figure, C-PAQ is a sector of a circle and BAD is semicircle. □ ABCD is a square. Find the area of shaded portion from the information given in the figure. ($\pi = 3.14$)



b) Seema sold an article at a gain of 10%. If she had bought it at 10% less and sold it for Rs. 220 less, she would have still gained 10%. Find the cost price of the article.

c) Line AB || line EF. Find x + y from the information given in the followig figure.



d) If 12 pumps running 7 hours a day can lift 2800 m^3 of water in 2 days. In how many days can 20 pumps running 9 hours a day will lift 9000 m^3 of water?

e) In a competition, for each correct answer 5 points are given while for a wrong answer 3 points are deducted. Swati scored 46 points. If the number of correct and wrong answers she gave would have interchanged, she would have scored 32 points. Find the number of correct and wrong answers given by her.