



Studybeesofficial

Where Minds Pollinate

Class 11

Mathematics

Chapter 6

Review Exercise 6

Notes

National Book Foundation

Follow Our Socials



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Review Exercise 6

Q no 2: No. of ways $\overset{4P_4}{\uparrow} = \frac{4!}{(4-4)!} = \frac{4!}{0!} = \boxed{24}$

Q no 3: let abc be 3-digit numbers where

∴ abc - unit
Hundred - unit

C is at unit place and

C = 0 it means abc = ab0

we have 0-9 (10 digits meaning)

Here we have 9 choices (1-9)

to fill a place and we have 10

options to fill **b** place so Total choices to formed 3-digit number = $9 \times 10 = 90$

$\boxed{9} \boxed{10} \boxed{\times}$

Qno (4) sol the number of ways to formed 6-Digit number = ${}^6P_6 = 720$

now numbers of digit start with '0' = ${}^5P_5 = 120$

Actual or Pure 6-Digit no are =

= Total - (numbers start with 0)

$$= 720 - 120 = 600$$

OR

Q. sol: 0, 2, 3, 4, 5, 7

$\boxed{\times} \boxed{5} \boxed{4} \boxed{3} \boxed{2} \boxed{1}$

∴ zero cannot come at first place e.g (052371) without repeating.

$$= {}^5P_1 \times {}^5P_1 \times {}^4P_1 \times {}^3P_1 \times {}^2P_1 \times {}^1P_1$$

$$= 5 \times 5 \times 4 \times 3 \times 2 \times 1$$

$$= 600$$

(Q5) No of Keys = $\frac{(n-1)!}{2} = \frac{(7-1)!}{2} = \frac{6!}{2} = 360$ ways

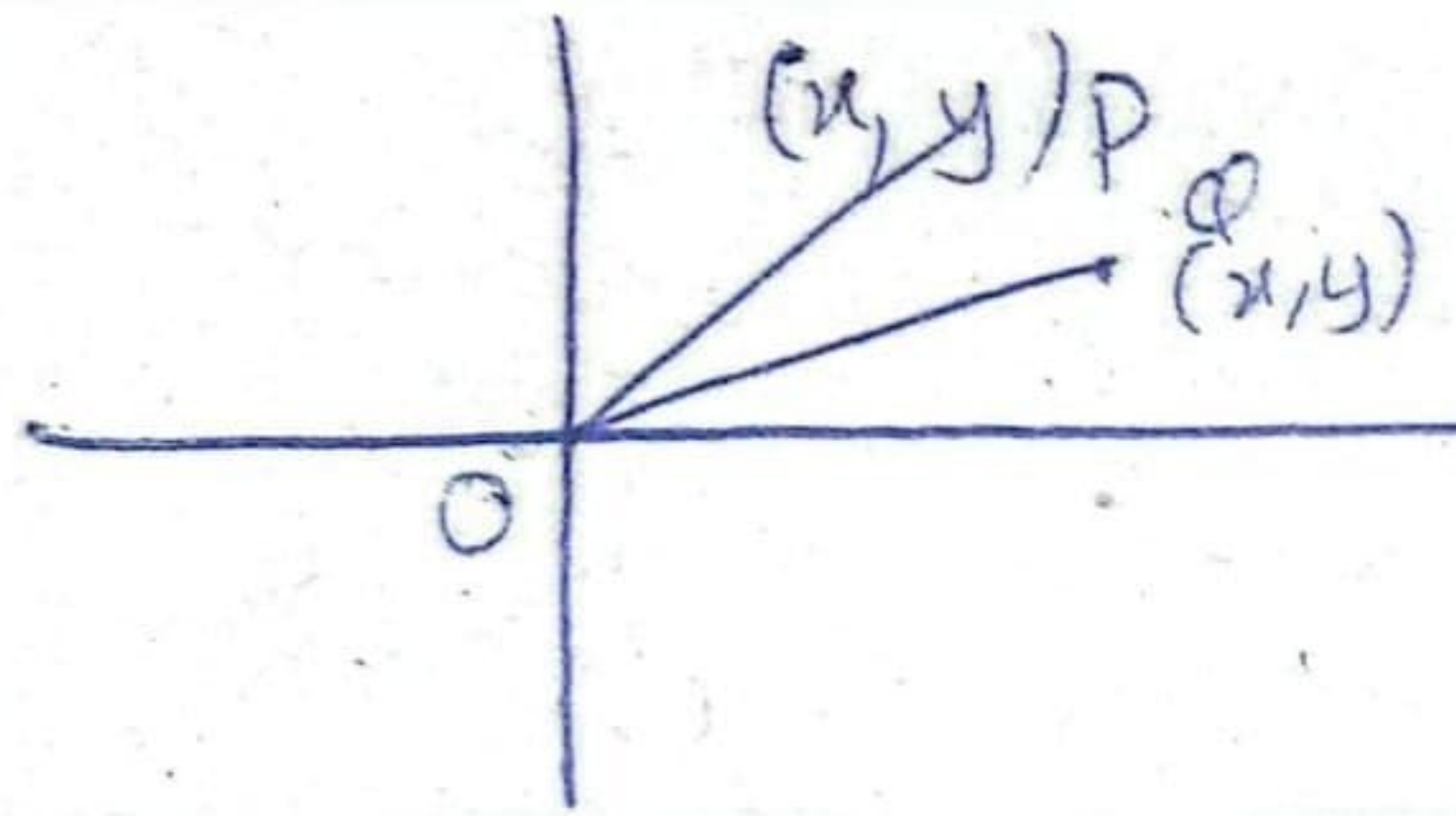
(Q6) sol: no of total Arrangement = $(n-1)!$

no of total Arrangement = $11! = 39916800$

$$= 39916800 \text{ (ways)}$$

No of ways when 2 persons sit together = $\frac{(11-1)!}{2} = 10! \times 2$

$$= 7257600$$



$\vec{OP}$ vector
 (OP, OQ)

$$\begin{aligned}
 \text{No of ways when 2 Persons don't} \\
 \text{sit together} &= \text{Total} - (\text{sitting together}) \\
 &= 39916800 - 7257600 \\
 &= \boxed{32659200}
 \end{aligned}$$