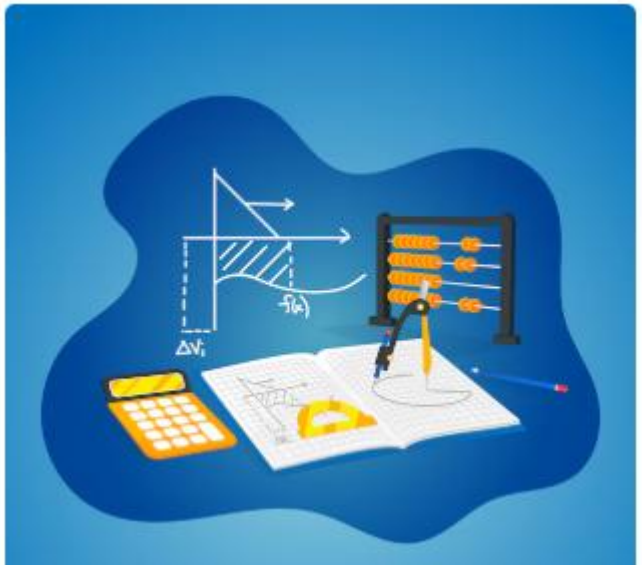
PW SKILLS | Aptitude Training

Quantitative Aptitude:
Number Systems

Remainders

Remainders: Problems Part 1



Q1. On dividing a number by 5, we get 3 as remainder. What will be the remainder when the square of this number is divided by 5?

A. 0 B. 1 C. 2 D. 4

x

$\frac{x}{5}$ R → 3

$3^2 = \frac{9}{5}$ R → 4

$8^2 = \frac{64}{5}$ R → 4

$13^2 = \frac{169}{5}$ R → 4

Q2. On dividing a number by 4, we get 2 as remainder. What will be the remainder when the square of this number is divided by 4?

A. 0 ✓

B. 1

C. 2

D. 4

$\frac{x}{4}$ R $\Rightarrow$ 2

$\frac{2^2}{4} = \frac{4}{4}$ R $\Rightarrow$ 0

$6^2 = \frac{36}{4}$ R $\Rightarrow$ 0

$10^2 = \frac{100}{4}$ R $\Rightarrow$ 0

Q3. On dividing a number by 774, we get 35 as remainder. What will be the remainder when the same number is divided by 18?

A. 14 B. 17 C. 18 D. 19

774) N (Q

35

774 × Q + 35 = N

18

R → 0 × q + 17

= 0 + 17 = 17

18) 774 (43

-72

54

-54

0

Q4. On dividing a number by 392, we get 31 as remainder. What will be the remainder when the same number is divided by 28?

A. 3 B. 14 C. 18 D. 19

$392)N(Q$

31

$N = 392 \times Q + 31$

$\frac{N}{28}$

$R \rightarrow 0 \times 4 + 3$

$= 0 + 3$

$= 3$

$28)392(14$

-28

112

-112

0

Q5. The difference of two numbers is 1365. On dividing the larger number by the smaller, we get 6 as quotient and the 15 as remainder. What is the smaller number?

A. 240 B. 270 C. 295 D. 360

Small = S

Big = B

B - S = 1365

B = 1365 + S

S) B (6

15

B = S x 6 + 15

1365 + S = 6S + 15

6S - S = 1365 - 15

5S = 1350

S = 1350 / 5 = 270

Q6. In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 46, what is the dividend?

A. 4236 B. 4306 C. 4336 D. 5336

$R = 46$

$d = 5 \times 46 = 230$

$d = 10Q = 230$

$Q = \frac{230}{10} = 23$

$D = dQ + R$

$= 230 \times 23 + 46$

$= 5290 + 46$

$= 5336$

$$\begin{array}{r} 23 \\ \times\ 23 \\ \hline 69 \\ 46\times \\ \hline 5290 \\ +\ 46 \\ \hline 5336 \end{array}$$

Thanks!