

Q1: Remainder of x^3+3x+7 when divided by $x+1$
Ans: 3

Q2: If $x+4$ is factor of $3x^2+kx+8$
Ans: 14

Q3: Equal roots: $2x^2+8x-k^3=0$
Ans: -2

Q4: Two digit number problem
Ans: 42

Q5: Father & son ages
Ans: (50,20)

Q6: Anand & Vishal ages
Ans: (30,10)

Q7: Solve equations for y
Ans: $16/9$

Q8: Books & pencils cost
Ans: (5,1)

Q9: Rational number sum with reciprocal
Ans: $2/3$ or $3/2$

Q10: Nature of roots
Ans: Real & Unequal

Q11: Roots 9 and 5
Ans: $x^2-14x+45=0$

Q12: Roots +6 transformation
Ans: $x^2-7x+24=0$

Q13: Roots $1/3$ transformation
Ans: $27x^2+24x+7=0$

Q14: a^2+b^2
Ans: 24

Q15: Find q
Ans: $49/4$

Q16: Roots 2 and -15
Ans: $x^2+13x-30=0$

Q17: Roots -1 transformation
Ans: $x^2-7x+14=0$

Q18: Equal roots k
Ans: ± 6

Q19: Roots $2\pm\sqrt{2}$
Ans: $x^2-4x+2=0$

Q20: $a+b$ from cubes
Ans: 1

Q21: a^3+b^3

Ans: 280

Q22: Expression value

Ans: 66

Q27: $a^3-b^3-c^3-3abc$

Ans: 0

Q28: $P(P^2+3P+3)$

Ans: 999999

Q30: Expression identity

Ans: $(a+b)(b+c)(c+a)$

Q31: Expression identity

Ans: $3abc(a+b)(b+c)(c+a)$

Q33: Next AP term

Ans: 11

Q34: 9th term AP

Ans: 37