n-11: Show that $(p-1)$ is a factor of $(p^{10}-1)$ and also of $(p^{11}-1)$

tion-12: find the value of k for which $(x-1)$ is a factor of
$(2x^3+9x^2+x+k)$

Question-13: find the value of a for which $(x-4)$ is a factor of
$(2x^3-3x^2-18x+a)$

Question-14: find the value of a for which $(x+1)$ is factor of
$(ax^3+x^2-2x+4a-9)$

Question-15: find the value of a for which $(x+2a)$ is a
factor of $(x^5-4a^2x^2+2x+2a+3)$.

Question-16: find the value of m for which $(2x-1)$ is a
factor of $(8x^4+4x^3-16x^2+10x+m)$.

Question-17: find the value of a for which the polynomial
$(x^4-x^3-11x^2-x+a)$ is divisible by $(x+3)$.

Question-18: without actual division, show that $(x^3-3x^2-13x+15)$
is exactly divisible by (x^2+2x-3)

Question-19: If (x^3+ax^2+bx+6) has $(x-2)$ as a factor and
leaves a remainder 3 when divided by $(x-3)$
find the value of a and b.

Question-20: find the values of a and b so that the
polynomials (x^3-10x^2+ax+b) is exactly
divisible by $(x-1)$ as well as $(x-2)$

Question-21: find the values of a and b so that the polynomial
$(x^4+ax^3-7x^2-8x+b)$ is exactly divisible by $(x+2)$ as
well as $(x+3)$

Question-22: If both $(x-2)$ and $(x-\frac{1}{2})$ are factors of px^2+5x+r
prove that $p=r$

Question-23: without actual division, prove that
$2x^4-5x^3-x+2$ is