Math 3 Act. #47

I. Write a polynomial equation of least degree with the zeros given.

1. $x = 8,\ x = 3$
2. $x = -4,\ x = 6$
3. $x = 2/3,\ x = -2$
4. $x = 1/2,\ x = 5/6$
5. $x = 2,\ x = 4,\ x = -3$
6. $x = 1/3,\ x = 7$
7. $x = 1/6,\ x = -2/3,\ x = 5$
8. $x = 1,\ x = -1$
9. $x = 5/7,\ x = 2,\ x = -2$
10. $x = 1/4,\ x = -5/6$
11. $x = 1,\ x = -2,\ x = 2$
12. $x = 3/4,\ x = -1/2$
13. $x = 5,\ x = -5$
14. $x = 3,\ x = -8,\ x = 1/2$
15. $x = 4,\ x = 3,\ x = -2$
16. $x = 3/7,\ x = 1/3$

II. Divide the following using Synthetic Division:

17. $(2x^3 + x - 5) \div (x+1)$
18. $(x^5 - 2x^3 + x^2 - 3) \div (x-2)$
19. $(3x^4 + 2x^2 - x - 1) \div (x+3)$
20. $\dfrac{x^4 + 3x^2 - 5}{x+3}$
21. $\dfrac{2x^2 + x - 5}{x-1}$