In-class work: p366/ #21-37 Due TODAY

FACTOR **Given polynomial $f(x)$ and a factor of $f(x)$, factor $f(x)$ completely.**

21. $f(x) = x^3 - 10x^2 + 19x + 30; x - 6$

22. $f(x) = x^3 + 6x^2 + 5x - 12; x + 4$

23. $f(x) = x^3 - 2x^2 - 40x - 64; x - 8$

24. $f(x) = x^3 + 18x^2 + 95x + 150; x + 10$

25. $f(x) = x^3 + 2x^2 - 51x + 108; x + 9$

26. $f(x) = x^3 - 9x^2 + 8x + 60; x + 2$

27. $f(x) = 2x^3 - 15x^2 + 34x - 21; x - 1$

28. $f(x) = 3x^3 - 2x^2 - 61x - 20; x - 5$

FIND ZEROS **Given polynomial function f and a zero of f, find the other zeros.**

29. $f(x) = x^3 - 2x^2 - 21x - 18; -3$

30. $f(x) = 4x^3 - 25x^2 - 154x + 40; 10$

31. $f(x) = 10x^3 - 81x^2 + 71x + 42; 7$

32. $f(x) = 3x^3 + 34x^2 + 72x - 64; -4$

33. $f(x) = 2x^3 - 10x^2 - 71x - 9; 9$

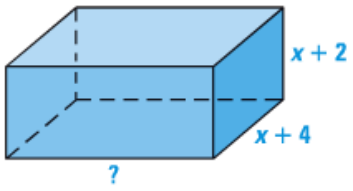
34. $f(x) = 5x^3 - x^2 - 18x + 8; -2$

35. ★ **MULTIPLE CHOICE** One zero of $f(x) = 4x^3 + 15x^2 - 63x - 54$ is $x = -6$. What is another zero of f?

(A) -9 (B) -3 (C) -1 (D) 3

GEOMETRY **You are given an expression for the volume of the rectangular prism. Find an expression for the missing dimension.**

36. $V = 2x^3 + 17x^2 + 46x + 40$



37. $V = x^3 + 13x^2 + 34x - 48$