MORE PRACTICE – More About Zeros of Polynomials

Use the Remainder theorem or long division to determine which numbers are zeros of the given polynomial.

1. $x^3 + 7x^2 - 36$;   1, 2, 3
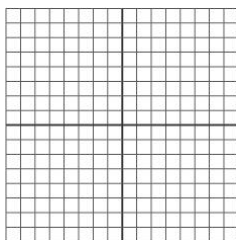
2. $x^3 - 2x^2 - 5x + 6$;   1, 2, 3

What is the remainder of the division problem:
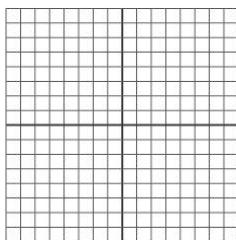
4. $\dfrac{x^3 + 4x^2 - 3x - 18}{x - 3}$

5. $\dfrac{x^3 - 2x^2 - 23x + 60}{x - 2}$

Use the given zero and long division to help find the remaining zeros then sketch the polynomial.
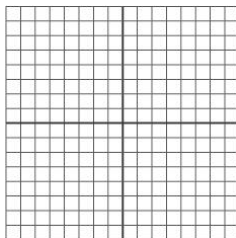
5. $x^3 + x^2 - 5x + 3$;   1 is a zero

6. $x^3 - 6x^2 + 12x - 8$; 2 is a zero

7. $x^3 + 7x^2 + 7x - 15$; −3 is a zero

8. $x^3 + x^2 - 20x$; 4 is a zero