Day 4 Practice: Using Synthetic Division to Solve Polynomials

1. $f(x) = (x^2 - x - 2)$. Find $f(x) \div (x - 2)$
   a. Is it a factor? YES or NO
   b. Show your work:

2. $f(x) = (x^2 + 12x + 36)$. Find $f(x) \div (x + 2)$
   a. Is it a factor? YES or NO
   b. Show your work:

3. $f(x) = (x^2 + 7x + 10)$. Find $f(x) \div (x + 5)$
   a. Is it a factor? YES or NO
   b. Show your work:

4. $f(x) = (6x^2 + x^3 - 23 - 4x)$. Find $f(x) \div (x - 7)$
   a. Is it a factor? YES or NO
   b. Show your work:

5. $f(x) = (x^3 - 91x - 88)$. Find $f(x) \div (x - 9)$
   a. Is it a factor? YES or NO
   b. Show your work:

6. $f(x) = 8x^3 + 74x^2 + 12x - 54$. Find $f(x) \div (x + 9)$
   a. Is it a factor? YES or NO
   b. Show your work: