1. WRITE THE 2-POINT FORM, SLOPE-POINT FORM, SLOPE-INTERCEPT FORM AND STANDARD FORM OF THE LINE THAT PASSES THROUGH $(1, 2)$ AND $(-2, -3)$.

2. FIND THE ROOTS OF $f(x) = 6x^3 + x^2 - x$. GRAPH THE FUNCTION.

3. USE THE DISCRIMINANT TO DETERMINE HOW MANY ROOTS EACH OF THE FUNCTIONS BELOW HAS.

(a) $x^2 - 2x + 1$ (b) $-3x^2 + x + 2$ (c) $-3x^2 + x - 2$

4. LET $f(x) = x^4 - 1$. WRITE THE SET $\{\text{dom } f : f(x) > 0\}$.

5. FACTOR $3x^3 + 10x^2 + x - 6$. FIND THE FIRST FACTOR BY LONG DIVISION WITH $x + 1$.

6. THE COMPOUND INTEREST FORMULA IS $A(t) = P\left(1 + \frac{r}{n}\right)^{nt}$. YOU WANT TO MAKE AN INVESTMENT COMPOUNDED ANNUALLY THAT DOUBLES IN 10 YEARS; WHAT INTEREST RATE DO YOU NEED?

7. FIND THE AREA BETWEEN THE x-AXIS AND THE FUNCTION.

(a) e^x, $x \in [-1, 1]$ (b) $3x^3 + 10x^2 + x - 6$, $x \in \left[-3, \frac{2}{3}\right]$
(CAREFUL! USE QUESTION 5.)