FUNCTIONS MATH 73

LAST NAME	FIRST NAME	DATE

1 (4 points). A function F is defined by the expression

$$F(x) = 90 - 3x - 4x^2$$

(a) Find $F(-3)$

(b) Find $F(7) - F(6)$

(c) Find $F(F(-5))$

(d) Find an expression for $F(x-2)$. State the answer as a polynomial in a simplified form.

2 (2 points)**.** Find the domain and the range of the function $P(x) = 11 - x^2$.

3 (2 points)**.** The function H is defined by an expression

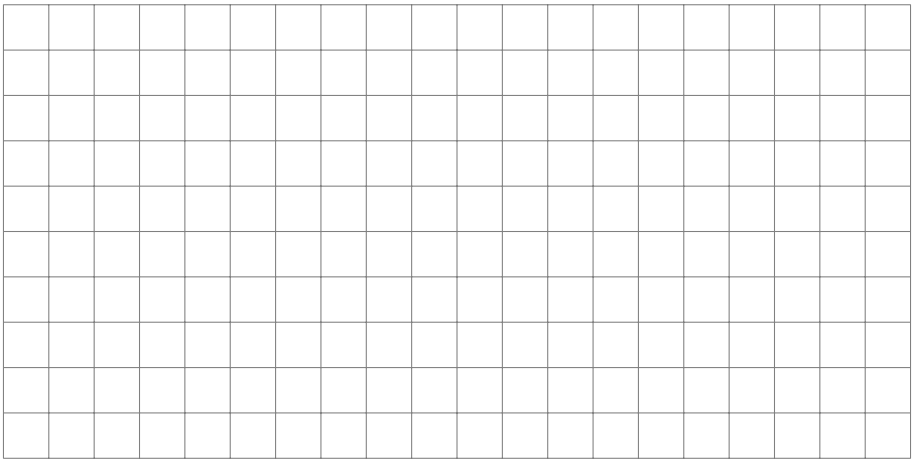
$$H(x) = \frac{x^2 + 4x + 4}{x^2 - 4}$$

Find the domain of H.

4. The function G is defined by an expression

$$G(x) = \sqrt{5x - 10}$$

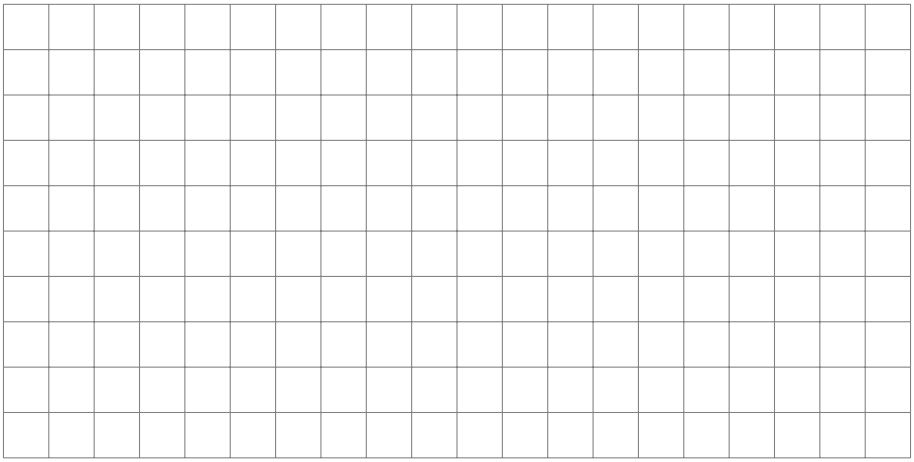
Sketch the graph $y = G(x)$:



Find the domain of G.

Find the range of G.

5. Sketch the graph of the function $C(x) = \sqrt{1-x^2}$. (Hint: square both sides of the equation $y = \sqrt{1-x^2}$ to get an idea about its shape).



Find the domain of C.

Find the range of C.