

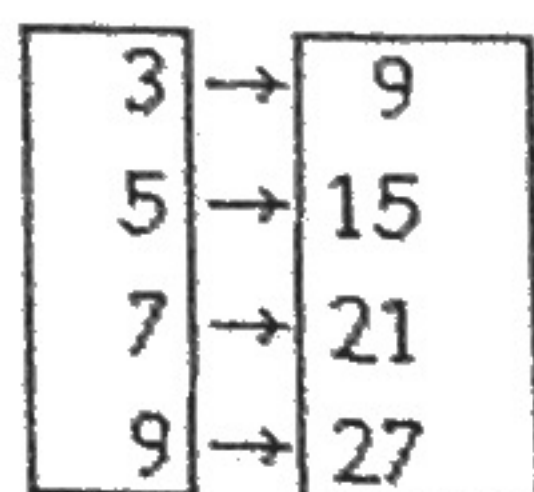
Algebra 3: QUIZ 2.1-2.2

Name: _____

Multiple Choice

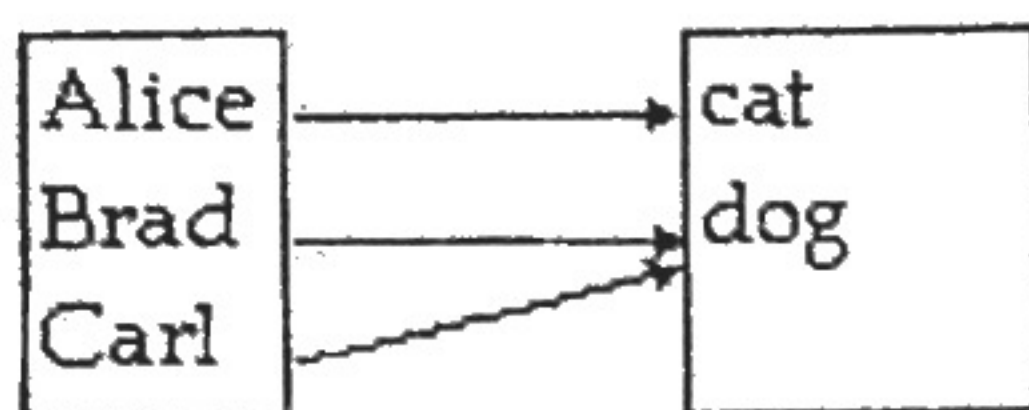
Identify the choice that best completes the statement or answers the question.

- _____ 1. Determine whether the relation represents a function. If it is a function, state the domain and range.



- a. function
domain: {3, 5, 7, 9}
range: {9, 15, 21, 27}
- b. function
domain: {9, 15, 21, 27}
range: {3, 5, 7, 9}
- c. not a function

- _____ 2. Determine whether the relation represents a function. If it is a function, state the domain and range.



- a. not a function
- b. function
domain: {cat, dog}
range: {Alice, Brad, Carl}
- c. function
domain: {Alice, Brad, Carl}
range: {cat, dog}

- _____ 3. Determine whether the equation defines y as a function of x .

$$x^2 - 5y^2 = 1$$

- a. not a function
- b. function

- _____ 4. Find the value for the function.

Find $f(-2)$ when $f(x) = x^2 + 3x - 2$.

- a. 8
- b. 0
- c. -4
- d. 12

- _____ 5. Solve the problem.

The function F described by $F(C) = \frac{9}{5}C + 32$ gives the Fahrenheit temperature corresponding to the Celsius

temperature C . Find the Fahrenheit temperature equivalent to -20°C .

- a. -112°F
- b. -4°F
- c. -76°F
- d. -40°F

6. Find the domain of the function.

$$f(x) = \frac{x^2}{x^2 + 7}$$

- a. $\{x|x > -7\}$
- b. all real numbers
- c. $\{x|x \neq 0\}$
- d. $\{x|x \neq -7\}$

7. For the given functions f and g , find the requested function and state its domain.

$$f(x) = 4x - 3; g(x) = 8x - 9$$

Find $f - g$.

- a. $(f - g)(x) = 12x - 12; \{x|x \neq 1\}$
- b. $(f - g)(x) = -4x + 6; \text{all real numbers}$
- c. $(f - g)(x) = 4x - 6; \text{all real numbers}$
- d. $(f - g)(x) = -4x - 12; \{x|x \neq -3\}$

8. For the given functions f and g , find the requested function and state its domain.

$$f(x) = 4x + 3; g(x) = 5x - 2$$

Find $\frac{f}{g}$.

- a. $(\frac{f}{g})(x) = \frac{5x - 2}{4x + 3}; \{x|x \neq -\frac{3}{4}\}$
- b. $(\frac{f}{g})(x) = \frac{4x + 3}{5x - 2}; \{x|x \neq \frac{2}{5}\}$
- c. $(\frac{f}{g})(x) = \frac{4x + 3}{5x - 2}; \{x|x \neq -\frac{3}{4}\}$
- d. $(\frac{f}{g})(x) = \frac{5x - 2}{4x + 3}; \{x|x \neq \frac{2}{5}\}$

9. For the given functions f and g , find the requested function and state its domain.

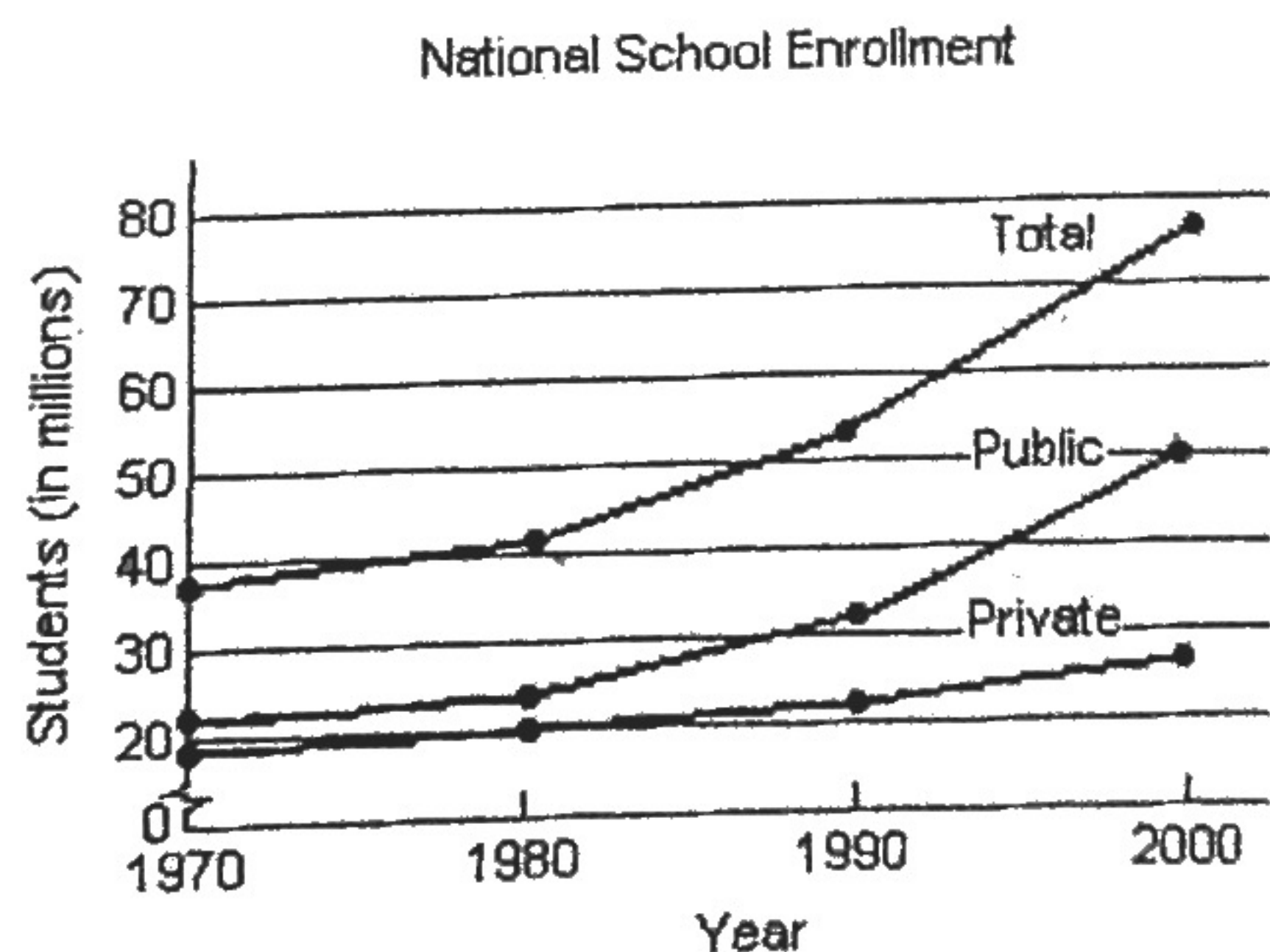
$$f(x) = 5x^3 + 3; g(x) = 5x^2 - 3$$

Find $f \cdot g$.

- a. $(f \cdot g)(x) = 25x^5 - 15x^3 + 15x^2 - 9; \{x|x \neq 0\}$
- b. $(f \cdot g)(x) = 5x^3 + 5x^2 - 9; \text{all real numbers}$
- c. $(f \cdot g)(x) = 25x^5 - 15x^3 + 15x^2 - 9; \text{all real numbers}$
- d. $(f \cdot g)(x) = 25x^6 - 15x^3 + 15x^2 - 9; \text{all real numbers}$

10. Solve the problem.

The following graph shows the private, public and total national school enrollment for students for select years from 1970 through 2000.



- a. i) T is the sum of r and u .
ii) 1970 - 1980
iii) 1980-1990
- b. i) T is the sum of r and u .
ii) 1970 - 1980
iii) 1990-2000
- c. i) T is the difference of r and u .
ii) 1970 - 1980
iii) 1990-2000
- d. i) T is the sum of r and u .
ii) 1990-2000
iii) 1970-1980

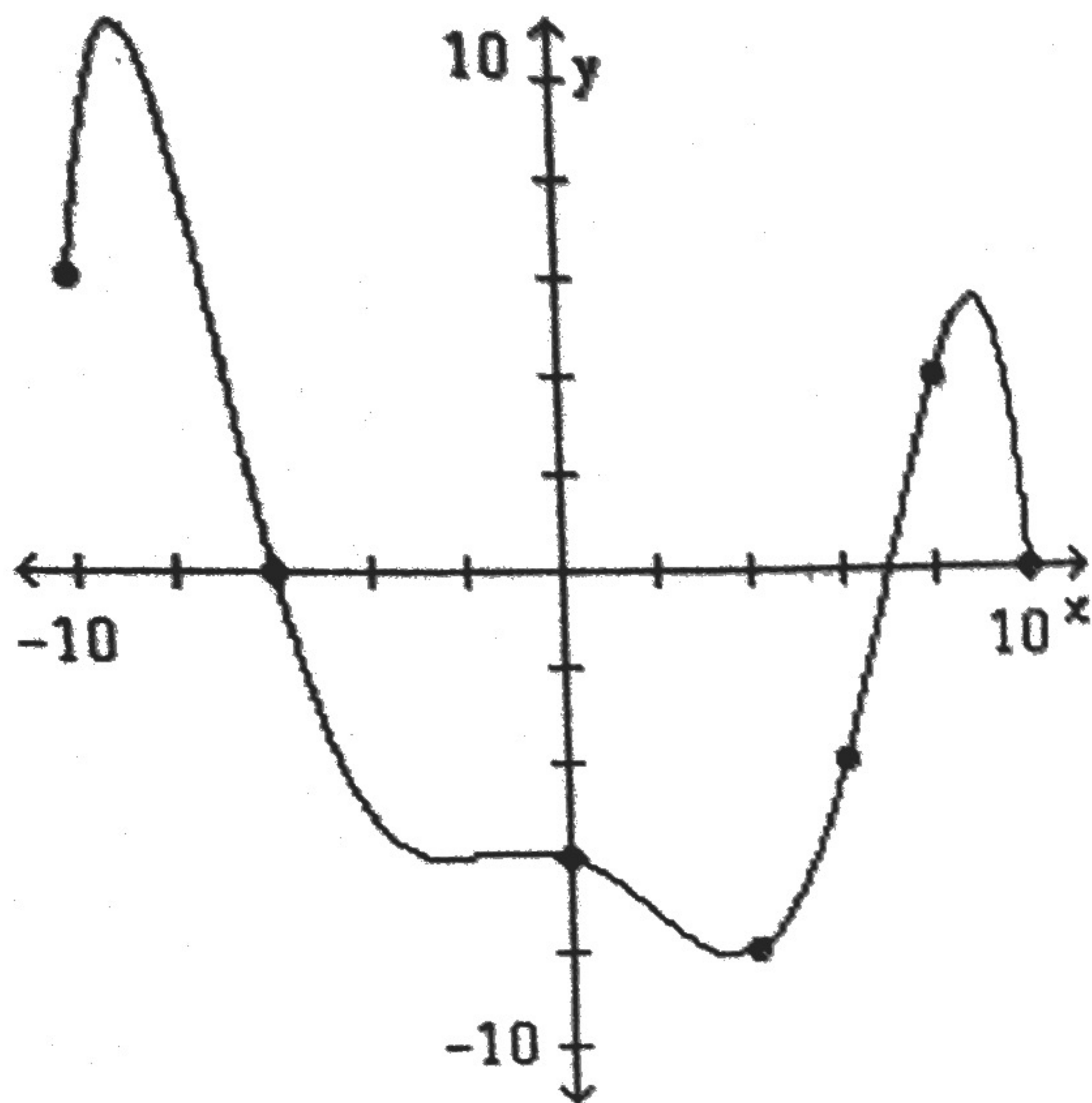
i) How is the graph for total school enrollment, T , determined from the graph of the private enrollment, r , and the public enrollment, u ?

ii) During which 10-year period did the total number of students enrolled increase the least?

iii) During which 10-year period did the total number of students enrolled increase the most?

11. The graph of a function f is given. Use the graph to answer the question.

Is $f(6)$ positive or negative?

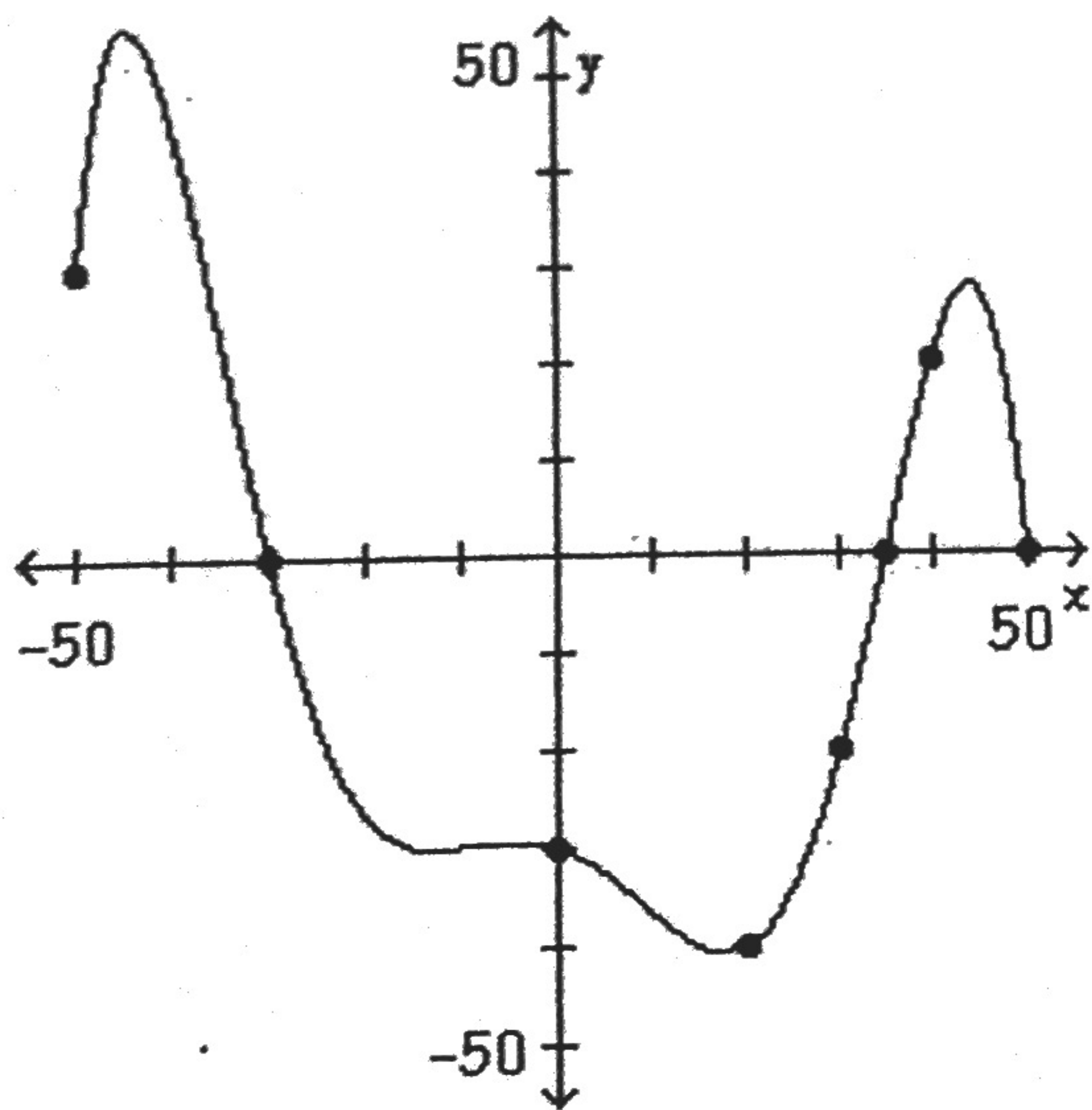


a. positive

b. negative

12. The graph of a function f is given. Use the graph to answer the question.

What are the x-intercepts?



a. -50, -30, 35, 50

b. -30, 35, 50

c. -30, 35

d. -30

Quiz 2.1-2.2

Name: _____

KH

Quiz Color: BLUE

1. A

2. C

3. A

4. C

5. B

6. B

7. B

8. B

9. C

10. B

11. B

12. B