

## Evaluating Piecewise Functions

ES1

C Evaluate each function.

$$1) f(x) = \begin{cases} -x-4 & , x \leq 5 \\ 2x^2-7 & , 5 < x \leq 10 \end{cases}$$

$$2) f(x) = \begin{cases} x^2 & , -15 \leq x \leq 0 \\ x-5 & , 0 < x \leq 15 \end{cases}$$

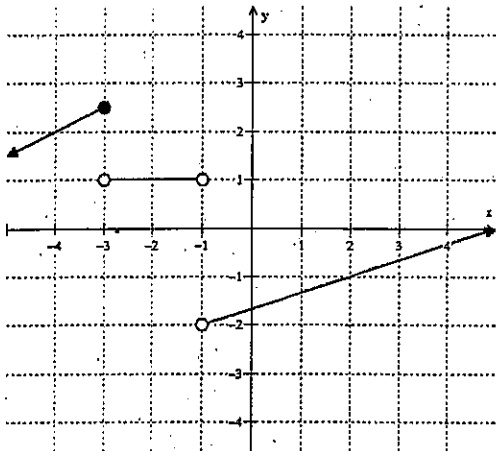
i)  $f(-2) =$

i)  $f(-5) =$

ii)  $f(7) =$

ii)  $f(15) =$

### B) Graphically

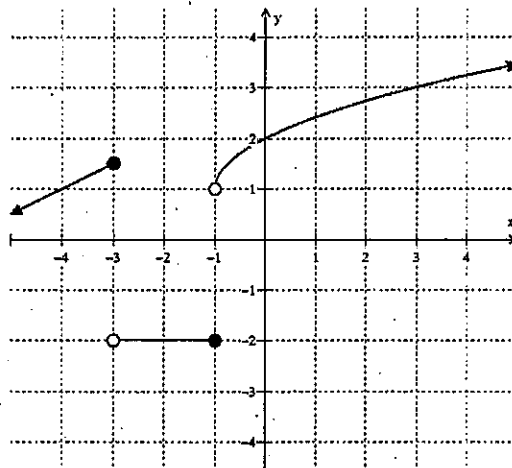


$f(2) =$

$f(-3) =$

$f(-1) =$

$f(-4) =$



$f(0) =$

$f(-4) =$

$f(-1) =$

$f(3) =$

C If  $f(x) = \begin{cases} (x+4)^2 & , -20 \leq x \leq 0 \\ 3x^2-x & , 0 < x \leq 20 \end{cases}$ ; what is the value of  $f(-11)$ ?

i) 132

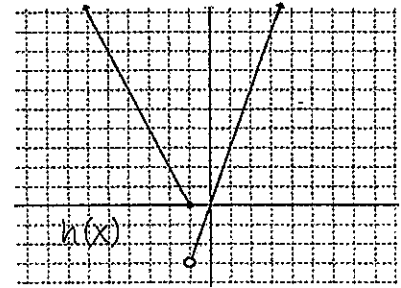
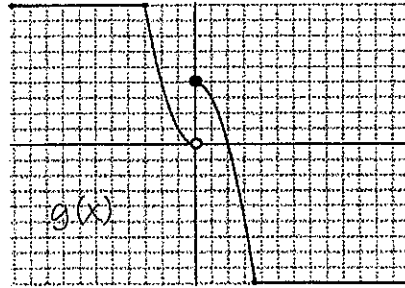
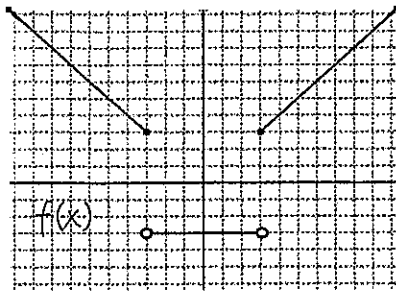
ii) -110

iii) 49

iv) -81

# Evaluating Piecewise Functions (1)

Name \_\_\_\_\_



Use the graphs above to evaluate the functions.

- |              |             |             |              |
|--------------|-------------|-------------|--------------|
| 1. $f(0)=$   | 2. $h(-1)=$ | 3. $g(0)=$  | 4. $f(3)=$   |
| 5. $g(-4)=$  | 6. $f(-3)=$ | 7. $g(10)=$ | 8. $h(0)=$   |
| 9. $h(-3)=$  | 10. $g(8)=$ | 11. $f(1)=$ | 12. $f(5)=$  |
| 13. $h(-2)=$ | 14. $g(1)=$ | 15. $h(2)=$ | 16. $f(-5)=$ |

$$f(x) = \begin{cases} 2x & x > 3 \\ x & 0 \leq x \leq 3 \\ x - 1 & x < 0 \end{cases} \quad g(x) = \begin{cases} \sqrt{x} & x \geq 0 \\ \sqrt{-x} & x < 0 \end{cases} \quad h(x) = \begin{cases} 5 & x > -1 \\ 2x & x \leq -1 \end{cases} \quad j(x) = \begin{cases} 3 & x = 5 \\ -2x + 1 & x \neq 5 \end{cases}$$

- |             |              |              |              |
|-------------|--------------|--------------|--------------|
| 1. $f(0)=$  | 2. $g(0)=$   | 3. $h(0)=$   | 4. $j(0)=$   |
| 5. $f(3)=$  | 6. $f(-3)=$  | 7. $g(-4)=$  | 8. $h(3)=$   |
| 9. $f(-5)=$ | 10. $j(5)=$  | 11. $h(-1)=$ | 12. $j(-3)=$ |
| 13. $g(9)=$ | 14. $g(1)=$  | 15. $h(4)=$  | 16. $j(5)=$  |
| 17. $f(4)=$ | 18. $h(-3)=$ | 19. $j(2)=$  | 20. $g(-1)=$ |