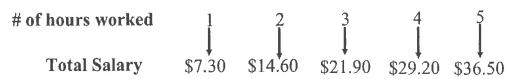


2-3 Introduction to Functions

- I can interpret function notation and explain how the output of a function is matched to its input.
- I can interpret the meaning of an ordered pair

Frank is an employee at Burger Castle and earns \$7.30 per hour, working the front counter. His salary is calculated by using the rule y = 7.30x, where x denotes the number of hours he works and y denotes his total salary.



We will name this function by using function notation: f(x) = 7.30x

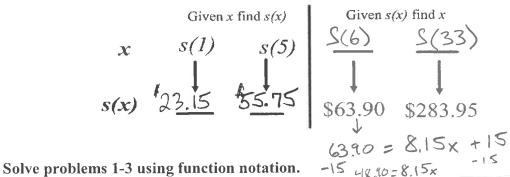
$$f(1) = \frac{7.30}{1.60}$$
, $f(2) = \frac{14.60}{1.60}$, $f(4) = 29.20 , $f(5) = 36.50

Explain what f(1) = 7.30 means in this problem situation. If he works one hours he gets

$$f(8) = 58.40$$
 $f(28) = 204.40$ $f(15) = 109.50 , $f(21) = 153.30

Sally also works at Burger Castle, but she earns \$8.15 per hour and a \$15.00 bonus for working the late shift. Her salary is calculated by using the rule y = 8.15x + 15, where x denotes the number of hours she works and y denotes her total salary.

We will name this function by using function notation: s(x) = 8.15x + 15



1. If Sally worked for 38 hours, then what would be her total salary?
$$S(38) = 8.15(38) + 15 = 324.7$$

$$S(38) = 324.7$$

2. If Sally made \$235.05, then how many hours did she work?

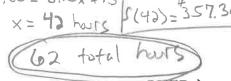
$$235.05 = 8.15 \times +15 \times =27 \quad 3(27) = 235.05$$
3 Sally sarred \$178.00 and \$357.30 during two weeks of work. How many hours did \$1.00 and \$357.30 during two weeks of work.

3. Sally earned \$178.00 and \$357.30 during two weeks of work. How many hours did Sally work for 357,30= 8.15x+15

those two weeks? $178 = 8.15x^{+1}5$ x = 20 hours

4. Explain why Sally's total salary is a function of hours worked.

How much she gets paid depends.



Function Practice:

$$f(x) = 3x$$

Write as an ordered pair (x, f(x))

$$f(1) = 3$$

$$f(2) = 6$$

$$f(-5) = -15$$

$$(-5, -15)$$

$$f(1.5) = 4.5$$

$$f\left(\frac{2}{3}\right) = 2$$

$$(\frac{2}{3}, 2)$$

$$f(0) = \bigcirc$$

Find the value of x when f(x) = 15.

$$(5, 15) \rightarrow 15 = 3x, x = 3$$

Find the value of x when f(x) = 0.

(0,0)

Find the value of x when f(x) = -12. $(\underline{-4}, -12)$

Find the value of x when f(x) = 10.5. (3, 5, 10, 5)

Find the value of x when
$$f(x) = -15$$
. $(-5, -15)$

Write a function rule, in function notation, that could result in the following ordered pairs:

f(x)
4
-2
0
2
4

x	f(x)
-2	-3
=1	-1
0	1
1	3
2	5

x	f(x)
-2	4
-1	1
0	0
1	1
2	4

$$f(x) = x^2$$