**Name Job 8 Function Notation**

**Part 1: Textbook**

Textbook Lesson 3 - 2 Page 100: 13, 15, 19, 20, 22, 30a

**Part 2: Algebra Regents Questions –**

1. Find the value of $f(-1)$ for the function $f\left(x\right)=-2x+6$. Show all work.

**2.** Solve for y and graph the equation: $8x-2y=14$

a) State the rate of change

b) State the y - intercept

**3.** The cost of a pack of chewing gum in a vending machine is $0.75. The cost of a bottle of juice in the same machine is $1.25. Julia has $22.00 to spend on chewing gum and bottles of juice for her team and she must buy seven packs of chewing gum. If *b* represents the number of bottles of juice, which inequality represents the maximum number of bottles she can buy?

1. $0.75b+1.25(7)\geq 22$ (3) $0.75\left(7\right)+1.25b\geq 22$
2. $0.75b+1.25(7)\leq 22$ (4) $0.75\left(7\right)+1.25b\leq 22$

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**4.** For which value of $P$ and $W$ is $P+W$ a rational number?

1. $P=\frac{1}{\sqrt{3}} and W=\frac{1}{\sqrt{6}}$

 (2) $P=\frac{1}{\sqrt{4}} and W=\frac{1}{\sqrt{9}}$

 (3) $P=\frac{1}{\sqrt{6}} and W=\frac{1}{\sqrt{10}}$

 (4) $P=\frac{1}{\sqrt{25}} and W=\frac{1}{\sqrt{2}}$

**5.** The owner of a small computer repair business has one employee, who is paid an hourly rate of $22. The owner estimates his weekly profit using the function $P\left(x\right)=8600-22x$. In this function, $x$ represents the number of

 (1) computers repaired per week

 (2) hours worked per week

 (3) customers served per week

 (4) days worked per week

**6.** The table to the right shows the average diameter of a pupil in a person’s eye as he or she grows older. What is the average rate of change, in millimeters per year, of a person’s pupil diameter from age 20 to 80?

 (1) $2.4$ (2) $-2.4$ (3) $0.04$ (4) $-0.04$

7. If $f\left(x\right)=\frac{\sqrt{4x^{2}-1}}{2x+1}$ and $g\left(x\right)=2x^{2}-x$, find each value.

1. $f(-1)$ b) $g(\frac{1}{2})$

8.

 

9. Myasia wants to rent a community recreation center. They charge a fixed fee of $55 plus $175 per hour to rent their facilities.

1. Write an equation that shows the total cost, *c* of renting the recreation center for *h* hours.

b) Determine the total cost for Myasia to rent the recreation center for 5 hours.