Let \( f(x) = 3x + 1 \) and \( y = 40 \). We know that the difference between the two half-minima is equal to the distance between the two half-maxima.

**(a)** Find \( f(x) = 3x + 1 \) and express your answer in terms of \( x \).

**(b)** How many integers per unit length will you see due to the four gaps?

**SOLUTION:**

There are two integers per unit length, so you will see due to the four gaps.

**(c)** What is the difference between two half-minima or two half-maxima?

**SOLUTION:**

There is no difference between two half-minima or two half-maxima.

**(d)** What are the half-minima and half-maxima?

**SOLUTION:**

There are no half-minima or half-maxima.

1. **Air Wedge**

2. **Air Wedge**

3. **Middleton Interference**

**SOLUTION:**

We know that the number of integers is equal to the distance between two half-minima or two half-maxima.

**(e)** What is \( n \)?

**SOLUTION:**

We know that the number of integers is equal to the distance between two half-minima or two half-maxima.

**Handout September 29 1989**

Physics 214 Fall 99 Problem Set 6—Optional Problems
7. Newton's Bands

\[
\begin{align*}
\frac{1}{10 \times 10} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1 \\
\frac{3.14 \times 2}{\text{sec}} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1
\end{align*}
\]

8. VHF/FM Radio

\[
\begin{align*}
\frac{1}{10 \times 10} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1 \\
\frac{3.14 \times 2}{\text{sec}} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1 \\
\frac{\text{sec}^2}{\text{sec}^2} & = 1
\end{align*}
\]

9. Power from the Sun

The power of the solar radiation incident on Earth is approximately

\[ \text{Power from the Sun} \]
The greatest integer value is $m = 181.1$

$$181.1 = \frac{6 	imes 10 \times \frac{9}{10} \times \frac{1}{2} \times \frac{1}{2}}{\frac{9}{10} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}} = \frac{N}{m} = m$$

the position of maximum thickness of the \textbf{A} line

Assume there is a dark fringe near the maximum thickness. Hence at

$$\cdots \frac{u}{v} \quad m = 1.1, 2.3, \ldots$$

1 cm
dark fringes appear whenever the wedge thickness is a multiple of $\lambda/2n$. 