

2-13

Math 2012 June 70C

So)

 $x = \text{initial amount}$

$$12x + (0 + 1 + 2 + \dots + 11) = 210$$

$$\begin{array}{r} 310 \\ - 100 \\ \hline 210 \end{array}$$

need this much

$$12x = 144$$

$$x = 12$$

$$F. \boxed{12}$$

$$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12$$

 $n=12$

$$\frac{12}{2} \cdot 13$$

↓
pairs sum

$$\sum_{i=1}^n n = 1 + 2 + 3 + 4 + 5 + \dots + n = \frac{n(n+1)}{2}$$

$$\sum_{i=1}^n 1 = \underbrace{1 + 1 + 1 + 1 + 1 + \dots + 1}_{n \text{ of these}} = n$$

$$\sum_{i=1}^n 3 = \underbrace{3 + 3 + 3 + \dots + 3}_{n \text{ of these}} = ?$$

$$51) (a+bi)(a-bi) = a^2 + b^2 \rightarrow \text{the } i \text{ part disappears}$$

$$(a+b)(a-b) = a^2 - \cancel{2ab} - b^2$$

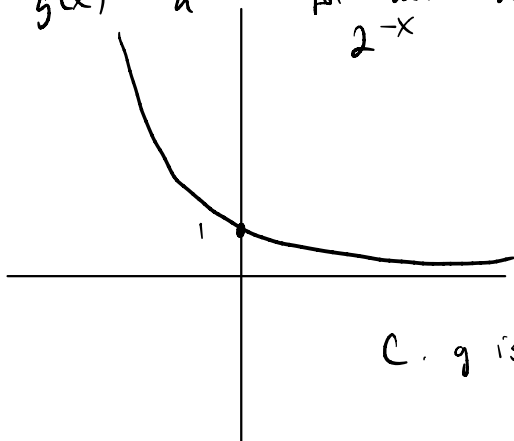
36)

$$\frac{1}{1 + \frac{1}{1 + \frac{1}{2}}}$$

$$\frac{\frac{3}{5}}{\frac{2}{3}} = \frac{3}{5} \times \frac{3}{2} = \frac{9}{10}$$

53)

$$g(x) = a^{-x}$$

for all $a > 1$ C. g is decreasing

$$g(x) = \frac{1}{a^x}$$

If a^x increases
first, then $\frac{1}{a^x}$ decreases