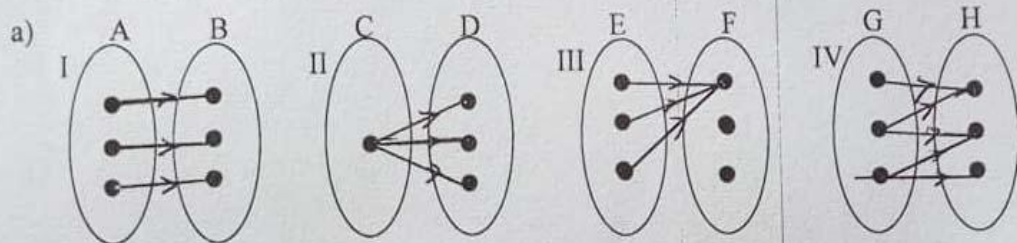


Answer all questions.

- Find the equation of a line passing through (1, 3) AND (5, 11)
- Set A and B are such that $n(A) = 12$, $n(B) = 10$, $n(A \cup B) = 18$ and $n(A' \cap B') = 5$. Find
 - $n(\epsilon)$
 - $n(A \cap B)$
- Given that $305_m = 113$. Find the value of base m.
- Use a papygram to define "is a factor of" in set $A = \{2, 3, 5, 6, 8\}$.
- Jane bought a box of 144 pencils for shs 5,000. She sold them for shs. 50 each. What was her percentage profit?
- Name the relations expected.



b) Which of those relations define a function?

- Given that $f(x) = 5x + 3$ find
 - $f(-2)$
 - x when $f(x) = 13$
 - $f^{-1}(x)$ (inverse function of x)
 - $f^{-1}(8)$
- Simplify;
 - $3x^2y^3 \times 2xy^2$
 - $18x^4y^5 \div 6x^2y^3$

c) (i) $\left(\frac{8}{27}\right)^{2/3}$ (ii) $(25)^{3/2}$ (iii) $(27)^{2/3}$
- Use the logarithm tables to evaluate.
 - 3.14×5.32
 - $84 \div 0.42$
- Evaluate;
 - $\log_3 27 + \log_2 16$
 - $\log_3 9 + \log_3 15 - \log_3 5$

End