

1. (a) Use the method of successive difference to find the next term: 2 6 22 56 114 202

. Find (a) $1+2+3+\dots+41$

(b) $1+3+5+\dots+41$

$$\text{Formulas: } 1+2+3+4+\dots+n = \frac{n(n+1)}{2}$$

$$1+3+5+\dots+n = \left(\frac{n+1}{2}\right)^2$$

2. $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$; $A = \{1, 2, 4\}$; $B = \{1, 3, 5\}$; $C = \{2, 5, 7, 8\}$

Find:

a. $B \cap C'$

b. $(B \cap C') \cup A$

3 (a) $N(A) = 150$; $n(B) = 135$; $n(A \cap B) = 120$; Use Venn diagram and find $n(A \cup B)$

(b) $n(B) = 170$; $n(A \cap B) = 110$ $n(A \cup B) = 200$ Use Venn diagram and find $N(A)$