

8. Determine the sum of the arithmetic series [1 point]

$$-49 - 25 - 1 + 23 + 47 + 71 + 95 + 119 + 143$$

$$S_{9} = \frac{9(-49 + 143)}{2}$$

$$= \boxed{423}$$

9. Determine the 151<sup>st</sup> term for the arithmetic series [1 point]

$$6.9 + 8.1 + 9.3 + \dots$$

$$\begin{array}{cc} \boxed{\phantom{0}} & \boxed{\phantom{0}} \\ \hline 1.2 & 1.2 \end{array}$$

$$t_{151} = 6.9 + 1.2(n-1) \quad \text{150 - comes from } (n-1)$$

$$= 6.9 + 1.2(150)$$

$$= 6.9 + 180$$

$$= \boxed{186.9}$$

10. Determine the sum of the first 17 terms of the arithmetic sequence in question 9 [2 points]

$$S_{17} = \frac{17(6.9 + 26.1)}{2}$$

$$= 280.5$$

$$t_{17} = 6.9 + 1.2(16)$$

$$= \boxed{26.1}$$

11. Determine the sum of this arithmetic series [2 points]

$$-14 - 36 - 58 - \dots - 256$$

$$\begin{array}{cc} \boxed{\phantom{0}} & \boxed{-22} \\ \hline -22 & \end{array}$$

$$-256 = -14 + (n-1)(-22)$$

$$-256 + 42 = -22n + 22$$

$$-22n = -264$$

$$\boxed{n = 12}$$

$$S_{12} = \frac{12(-14 + (-256))}{2}$$

$$= -2442$$

$$\boxed{1620}$$