

|      |                                                                                |
|------|--------------------------------------------------------------------------------|
| 2(a) | $\text{Var}(Y) = 4$                                                            |
|      | $\text{Var}(X + Y) = 3^2 + '4'$                                                |
|      | sd of $X + Y = \sqrt{13} = 3.61$                                               |
|      |                                                                                |
| 2(b) | $\text{Var}(5X) = 5^2 \times 3^2$                                              |
|      | $\text{Var}(5X - Y) = \text{Var}(5X) + \text{Var}(Y) = "5^2 \times 3^2" + "4"$ |
|      | sd of $5X - Y = \sqrt{229}$ or 15.1 (3 sf)                                     |
|      |                                                                                |