|  |  |
| --- | --- |
| **S3 National 5 Homework Exercise 7** | C:\Users\Ian\Pictures\CHS.jpg |
|  |
| **Equations & Inequations** |
|  |
| Issued by: |  | Return by: |  |
|  |
| **1.** | Solve: |
|  |  |
|  | a) | 9x – 1 = 7x + 15 | b) | 2(x + 3) = 11 | c) | 2(1 + 5x) = 3x – 5 |
|  |  |  |  |  |  |  |
|  | d) | (x + 1)2 = x2 + 9 | e) | x + 5 = -1 | f) | x - 4 = 3 |
|  |  |  |  |  |  |  |
|  | g) | (x + 3) = 4 | h) | - 2 = 1 |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **2.** | Solve:  |
|  |  |  |  |  |  |  |
|  | a) | 5x + 8 ≤ 3x + 18 | b) | 2(2x + 4) > 36 – 6x | c) | 15 – 7x ≥ 12 - x |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **3.** | In each question below: | (i) | Make an equation or inequation from the information given |
|  |  |  |  |  |  |  |
|  |  |  | (ii) | Solve to find the answer |
|  |  |  |  |  |
|  | a) |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

|  |  |
| --- | --- |
| **Q.** | **Award 1 Mark for each ●** |
|  |  |
| **1.** | a) | ● 2x = 16● x = 8 | b) | ● 2x = 5● x = 5/2 | c) | ● 7x = -7● x = -1 | d) | ● x2 + 2x + 1● 2x = 8● x = 4 |
|  | e) | ● x = -6● x = -18 | f) | ● x = 7● x = 28 | g) | ● 2(x + 3) = 20● 2x = 14 OR x + 3 = 10● x = 7 | h) | ● = 3● x – 1 = 9● x = 10 |
|  |  |  |  |  |  |  |  |  |
| **2.** | a) | ● 2x ≤ 10● x ≤ 5 | b) | ● 10x > 28● x > 2.8 | c) | ● – 6x ≥ - 3 ● x …… ½● x ≤ ½  |  |  |
|  |  |  |  |  |  |  |  |  |
| **3.** | a) | ● 4√2 | b) | ● 10√3 | c) | ● 7√2 | d) | ● 5√7 | e) | ● 4√5 | f) | ● √18● 3√2 | g) | ●  |
|  | h) | ●  | i) | ● 8√2 | j) | ● -9√7 | k) | ● 2√2● 3√2● 5√2 | l) | ● 3√7● 2√7● √7 | m) | ● √6+√10 | n) | ● -√7● -5 |
|  |  |  |  |  |  |  |
| **4.** | a) | ●  | b) | ● ● 4√5 | c) | ● ●  | d) | ●  | e) | ● x ●  |
|  |  |  |  |  |  |  |
| **5.** | a) | ● 2r11 | b) | ● 2p4 | c) | ● 24q10 | d) | ●  |
|  |  |  |  |  |  |  |  |  |
|  | e) | ● m10 | f) | ● 64g12 | g) | ● 6k4 – 15k-1● 6k4 –  | h) | ● 8r11 ÷ r6● 8r5 |
|  |  |  |  |  |  |  |  |  |
| **6** | a) | (i) | ●  | (ii) | ●  | (iii) | ●  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | b) | (i) | ●  | (ii) | ●  | (iii) | ●  |  |  |
|  |  |  |  |  |  |  |  |  |
| **7.** | a) | ● √49● 7 | b) | ● ● 4 | c) | ● ● 52● 25 | d) | ● ●●  |
|  |  |  |  |  |  |  |  |  |
|  | **Total = 80 marks** |