Table

Description automatically generated

|  |  |  |  |
| --- | --- | --- | --- |
| Hexa | Binary | B2U\_4(x) | B2T\_4(x) |
| 0xA | 1010 | 8 + 2 = 10 | -8 + 2 = -6 |
| 0x1 | 0001 | 1 | 1 |
| 0xB | 1011 | 8+2+1=11 | -8+2+1=-5 |
| 0x2 | 0010 | 2 | 2 |
| 0x7 | 0111 | 7 | 7 |
| 0xC | 1100 | 12 | -8+4=-4 |
|  |  |  |  |

Table

Description automatically generated

|  |  |
| --- | --- |
| 0x2e0 | 0010 1110 0000 = 2\*256 + 16\*14 + 0 = 736 |
| -0x58 | 0101 1000 = -5\*16 + -8 = -88 |
| 0x28 | 16\*2+8=40 |
| -0x30 | -3\*16=-48 |
| 0x78 | 7\*16+8=120 |
| 0x88 | 8\*16+8=136 |
| 0x1f8 | 1\*256+15\*16+8=504 |
| 0xC0 | 12\*16=192 |
| -0x48 | -4\*16-8 = -72 |
|  |  |

Table

Description automatically generated

Table

Description automatically generated

Table

Description automatically generatedTable

Description automatically generatedFigure 2.19 is just to help.

|  |  |  |
| --- | --- | --- |
| Expression | Type | Evaluation |
|  | Unsigned | 1 |
|  | Signed | 1 |
|  | Unsigned | 1 |
|  | Signed | 1 |
|  | Unsigned | 0 |

Text, table

Description automatically generated

Graphical user interface, text, application

Description automatically generatedSee code

Solution not pasted here yet

Table

Description automatically generated

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a |  | a << 2 |  | Logical a >>3 |  | Arithmetic a >> 3 |  |
| Hex | Binary | Binary | Hex | Binary | Hex | Binary | Hex |
| 0xD4 | 1101 0100 | 0101 0000 | 0x50 | 0001 1010 | 0x1A | 1111 1010 | 0xFA |
| 0x64 | 0110 0100 | 1001 0000 | 0x90 | 0000 1100 | 0x0C | 0000 1100 | 0x0C |
| 0x72 | 0111 0010 | 1100 1000 | 0xC8 | 0000 1110 | 0x0E | 0000 1110 | 0x0E |
| 0x44 | 0100 0100 | 0001 0000 | 0x10 | 0000 1000 | 0x08 | 0000 1000 | 0x08 |



Table

Description automatically generatedTable

Description automatically generated

|  |  |  |  |
| --- | --- | --- | --- |
| K | Shifts | Add/subs | Expressoin |
| 7 | 1 | 1 | (x<<3) – x |
| 30 | 4 | 3 | (x<<7) – (x<<6) – (x<<5) – (x<<1) |
| 28 | 2 | 1 | (x<<5) – (x<<2) |
| 55 | 2 | 2 | (x<<6) – (x<<3) – x |

64- 32 – 2

128 – 64 – 32- 2

1 2 4 8 16 32 64 128

Table

Description automatically generated with medium confidence