

1.

(a) `int64_t a, b;`

`a = a + b;`

```
LDRD    R0, R1, a
LDRD    R2, R3, b
ADDS    R0, R0, R2
ADC     R1, R1, R3
STRD    R0, R1, a
```

(b) `int64_t a;`

`a -= 5;`

```
LDRD    R0, R1, a
SUBS    R0, R0, 5
STRD    R0, R1, a
```

(c) `int32_t a, b, c;`

`c = a * b;`

```
LDR     R0, a
LDR     R1, b
MUL{S}  R2, R1, R0
STR     R2, c
```

(d) `uint32_t a, b, c;`

`c = a * b;`

```
LDR     R0, a
LDR     R1, b
MUL     R2, R1, R0
STR     R2, c
```

(e) `int32_t a, b, c;`

`c = a / b;`

```
LDR     R0, a
LDR     R1, b
SDIV    R2, R0, R1
STR     R2, c
```

(f) `uin32_t a, b, c;`

`c = a / b;`

```
LDR     R0, a
```

```
LDR      R1, b
UDIV     R2, R0, R1
STR      R2, c
```

(g) int32_t a, b, c;

c = a % b;

```
LDR      R0, a
LDR      R1, b
SDIV     R2, R0, R1      //R2 = quotient
MLS      R2, R1, R2, R0   //R2 = a - b * c
STR      R2, c
```

3.

uint32_t Volume(uint32_t height, uint32_t width, uint32_t len);

Volume:

//R0 = height, R1 = width, R2 = len

MUL R3, R0, R1

MUL R3, R3, R2

BX LR