

Answers to be released on Wednesday of Week 2

1. Suppose a, b and c are integral type variables that have been assigned the values $a = 12$, $b = 5$ and $c = -6$. Determine the value of each of the following arithmetic expressions.

- a) $a + b$
- b) $2 * b + 3 * (a - c)$
- c) a / b
- d) $a \% b$
- e) $a * b / c$
- f) $a * (b / c)$

- 2) A C program contains the following declarations:

```
int i, j;  
long ix ;  
short s;  
float x;  
double dx;  
char c;
```

Determine the data type of each of the following expressions.

- a) $i + c$
- b) $dx + ix$
- c) $((int) dx) + ix$
- d) $i + x$
- e) $ix + j$

- 3) Determine the data type of each of the following literals.

- a) 150
- b) 15.3
- c) '2'
- d) 3.14f
- e) 0x7fffU
- f) 01234L

- 4) Declare an unsigned long integer constant (using `const` keyword) with identifier `ulconst` and value 127,745.
- 5) Declare an unsigned long integer constant (using macro) with identifier `ULCONST` and value 127,745.
- 6) Declare an unsigned integer constant (using macro) with with identifier `STATUS` and value 48,879 in hexadecimal.

- 7) Declare an character constant (using `const` keyword) with with identifier `SECRET_KEY` and the newline character as value.