

## Task 1.1.3 Practice Exercises - Variables, types and casting

1. Give appropriate declarations (type and name) for variables used to store the following values:

- |   |  |
|---|--|
| a) An employee's taxable salary           | e) The average rainfall for the past month |
| b) The month number within a year         | f) A letter to hold an answer ('y' or 'n') |
| c) An employee identification number      | g) The constant string "Hello"             |
| d) The capacity of a tank in cubic inches | h) The conversion rate from \$AUS to \$US  |

2. Assuming that the types of the variables x, y, and z are int, float and double respectively, which of the following statement(s) are likely to result in error ?

- |           |           |           |
|-----------|-----------|-----------|
| a) x = y; | b) x = z; | c) y = x; |
| d) y = z; | e) z = x; | f) z = y; |

3. The following code segment prints an incorrect result (instead of the expected result of `sqr = 10000000000`).

```
int num1 = 100000;  
int sqr = num1 * num1;  
System.out.println("sqr = " + sqr);
```

Describe the problem / error that has occurred and suggest a solution or work-around to the problem which will allow the correct result to be stored and printed.