1 Operators, expressions

1. What is the value of `result` when the following code is executed?

```
1        int result = 29 % 5;
```

2. What is the value of `result` when the following code is executed?

```
1        int result = 17 / 5;
```

3. What is the value of `result` when the following code is executed?

```
1        float result = 17 / 5;
```

4. What is the value of `result` when the following code is executed?

```
1        float result = 17 / 5.0;
```

5. What is the value of `result` when the following code is executed?

```
1        boolean result = 5 > 3 && 6 < 4 && 3 == 3;
```

6. What is the value of `result` when the following code is executed?

```
1        boolean result = (true && true) || (true && false);
```

7. What is the value of `result` when the following code is executed?

```
1        boolean e1 = (15/4 == 3);
2        boolean e2 = (6%4 == 2);
3        boolean result = e1 && e2;
```

8. What is the value of `result` when the following code is executed?

```
1        boolean result = 5 > 3 || 6 < 4 && 3 == 3;
```

9. Write an expression that adds 5 to the product of 2 and 7.

10. Write an expression that multiplies the sum of 2 and 7 by 5.

11. Write an expression that evaluates to the last digit of a given integer `n` (assume the given integer is not negative).

12. Write an expression that evaluates to `true` if a given integer `n` is between 1 and 6 (including 1 and 6), otherwise evaluates to `false`.

13. Write an expression that evaluates to `true` if a given integer is outside the range [1...6] (including 1 and 6), otherwise evaluates to `false`.

14. Write an assignment statement that assigns, to a `boolean` variable `result`, `true` if two `boolean` values $e1$ and $e2$ are different, otherwise`false`. This is known as the `XOR` operator.

15. Write an expression that evaluates to `true` if a given integer `n` is a multiple of 3 but not a multiple of 27, otherwise evaluates to `false`.

16. Write an assignment statement that assigns, to an integer variable `result`, the remainder when 57 is divided by 6.