

# Expressions and Messages

This exercise is about reading and understanding Pharo expressions, and differentiating between different types of messages and receivers.

Note that in the expressions you will be asked to read and executed, you can assume that the implementation of methods generally corresponds to what their message names imply (i.e.,  $2 + 2 = 4$ ).

In addition, most of the expressions we use in the exercises are expressions that you can execute in Pharo, so do not hesitate.

## Exercise: Literal objects

What kind of object does the following literal expressions refer to?

```
[ 'Hello, Dave' ]
```

```
[ 1.3 ]
```

```
[ #node1 ]
```

```
[ #(2 33 4) ]
```

```
[ [ :each | each scale: 1.5 ] ]
```

```
[ $A ]
```

```
[ true ]
```

```
[ 1 ]
```

## 1.1 Exercise: Messages

For each of the expressions below, fill in the answers:

- What is the receiver object?
- What is the message selector?
- What is/are the argument (s)?
- What is the result returned by this expression execution?

```
[ 3 + 4
```

```
[ Date today
```

```
[ anArray at: 1 put: 'hello'
```

```
[ anArray at: i
```

```
[ #(2 33 -4 67) collect: [ :each | each abs ]
```

```
[ 25 @ 50
```

```
[ SmallInteger maxVal
```

```
[ #(a b c d e f) includesAll: #(f d b)
```

```
[ true | false
```

```
[ Point selectors
```

### Exercise: Scope

- What can one assume about a variable named Transferator?
- What can one assume about a variable named rectangle?