

Past-paper walk-through

Calling Instance Methods ■ 1.14

eXercise

Questions in this set

- 2025 Q1
- 2022 Q1

Reading the mark scheme

- **B1** a mark that stands on its own – the point is either made or not.
- **M1** a *method* mark: the right approach, even if the number is wrong.
- **A1** an *answer* mark, and it usually needs its M mark first.
- **C1** a working mark on the way to the answer.
- **//** separates answers the examiner accepts equally.
- **ecf** = error carried forward: a later part is marked on your own earlier answer.
- **owtte** = “or words to that effect” – the wording need not match.

Question 1

2025 ■ Q1

This question involves dog walkers who are paid through a dog-walking company to take dogs for one-hour walks. A dog-walking company has a varying number of dogs that need to be walked during each hour of the day. A dog-walking company is represented by the following DogWalkCompany class.

```
k+kdpublic+w k+kdclass n+ncDogWalkCompany
p
+w      c+cm/**
c+cm      * Returns the number of dogs, always greater than 0, that are available
c+cm      * for a walk during the time specified by hour
c+cm      * Precondition: 0 = hour = 23
c+cm      */
+w      k+kdpublic+w k+ktint+w n+nfnumAvailableDogsp(k+ktint+w nhourp)
+w      p+w c+cm/* implementation not shown */+w p
+w      c+cm/**
c+cm      * Decreases, by numberDogsWalked, the number of dogs available for a walk
c+cm      * during the time specified by hour
c+cm      * Preconditions: 0 = hour = 23
c+cm      *
c+cm      *                  numberDogsWalked  0
c+cm      */
+w      k+kdpublic+w k+ktvoid+w n+nfupdateDogsp(k+ktint+w nhourp,+w k+ktint+w nnumberDogsWalkedp)
```