

## Solutions

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Each answer shows the steps, then the **result**.

### 2.1

- negative reinforcement removes something aversive and **increases** behaviour; punishment **decreases** behaviour

### 2.2

- variable-ratio; reinforcement is unpredictable, so responding persists during unreinforced periods and resists extinction

### 2.3

(a)

- shaping by successive approximation

(b)

- the complete behaviour never occurs spontaneously, so there is nothing to reinforce until it is built up

### 3.1 B

- removing an aversive state increases the behaviour that removed it

### 3.2 C

- the scallop pattern is characteristic of fixed-interval reinforcement

### 3.3

(a)

- it suppresses behaviour without teaching what to do instead

(b)

- reinforce the desired behaviour, e.g. praise for on-task work, because reinforcement builds the behaviour you want rather than only removing one you do not

### 3.4

(a)

- Manager A uses a **variable-interval** schedule — reinforcement after an unpredictable period (1). Manager B uses a **fixed-ratio** schedule — after a set number of responses (1). The **variable** schedule produces the steadier rate, because the next observation could come at any moment (1)

(b)

- Negative reinforcement removes an **unpleasant** stimulus in order to **increase** a behaviour (1); here the disliked shift is taken away and greeting becomes more frequent,

whereas punishment would add something unpleasant, or remove something pleasant, in order to **decrease** a behaviour (1)

(c)

- Reinforce **successive approximations** — first eye contact, then a nod, then a word, then a full greeting — reinforcing each closer approximation and no longer reinforcing the earlier one (1)

(d)

- **Extinction** (1); a brief later return of the behaviour would be **spontaneous recovery**