Review: Control flow with `if`, `else`, `else if`

1. Guess the type of `if` structure and the required pseudocode.

You're exploring a dungeon. If you have enough gold (> 50), you `repair your armor`. If your health is low (< 30), you `rest to recover.` These actions are *independent and can both happen*. Write pseudocode with the correct `if` structure.

```
SET gold = 75
SET health = 20
PRINT "You take a moment to assess your status…"
```

2. Guess the type of `if` structure and the required pseudocode.

You trigger a trap in the dungeon. Your fate depends on your `agility` (1-100). Write pseudocode with the correct `if` structure for these outcomes: Agility ≥ 80: `"You dodge the trap easily!"`, Agility ≥ 50: `"You stumble but avoid the trap."`, Agility ≥ 20: "You're hit but survive.", Otherwise: "The trap defeats you."

```
SET agility = 45
PRINT "A trap springs in the dungeon!"
```

3. Guess the type of `if` structure and the required pseudocode.

You find a locked chest. To open it and claim a reward, you need a lockpick (true/false) and dexterity (0-100) of at least 60. Write pseudocode with the correct `if` structure for these outcomes: Lockpick and dexterity ≥ 60: `"You open the chest and find treasure!"`, Lockpick but dexterity < 60: `"You fail to pick the lock."`, No lockpick: `"You can't attempt to open the chest."`

```
SET has lockpick = true
SET dexterity = 55
PRINT "You take a moment to assess your status…"
```

4. What do you think of this problem/pseudocode? Correct? Can you fix it?

You're ambushed by goblins. If your strength is high (> 80), you fight them off. If you have a shield (true/false), you take less damage. These are separate actions that can both occur.

```
SET strength = 85
SET has_shield = true

IF strength > 80 THEN
    PRINT "You fight off the goblins!"
ELSE IF has_shield THEN
    PRINT "You take less damage!"
END IF
```

5. What do you think of this problem/pseudocode? Correct? Can you fix it?

You approach a magical door. To enter, you need a magic gem (true/false) and `mana` (0-100) of at least 50. Write pseudocode with the correct `if` structure for: Both true: `"You pass through the door!"`, Gem but `mana` < 50: `"The door blocks you."`, No gem: `"The door remains sealed."`

```
SET has_gem = true
SET mana = 40
PRINT "You face a magical door!"

IF has_gem THEN
     PRINT "You pass through the door!"
ELSE IF mana >= 50 THEN
     PRINT "The door blocks you."
ELSE
     PRINT "The door remains sealed."
END IF
```