

```
1 // Create sprites
2 var player = createSprite(100, 200) ;
3 player.setAnimation(1 "player");
4 var coin = createSprite(250, 200) ;
5 coin.setAnimation(1 "coin");
6 // Initialize score
7 var score = 0;
8
9 function draw() {
10   background(1 "lightblue");
11   // Move player with arrow keys
12   if (keyDown(1 "right")) {
13     player.x += 3;
14   }
15   if (keyDown(1 "left")) {
16     player.x -= 3;
17   }
18   // Check for collision
19   if (player.isTouching(coin)) {
20     score = score + 1;
21     coin.x = random(50, 350);
22     coin.y = random(50, 350);
23   }
24   drawSprites();
25   // Display score
26   textSize(28);
27   fill(1 "black");
28   text("Score: " + score, 10, 25);
29 }
30
```

Comprehension Questions

1. Multiple Choice

What will happen when the player sprite touches the coin sprite?

- A. The game will end.
- B. The coin will disappear permanently.
- C. The score will increase by 1, and the coin will move to a new random position.
- D. The score will reset to 0.

☒ **Answer:** C

2. Multiple Choice

Which line of code checks whether the player and the coin are touching?

- A. `player.move();`
- B. `if (player.isTouching(coin))`
- C. `if (coin == player)`
- D. `coin.isTouching(player);`

☒ **Answer:** B

3. Alternate Format – “Predict the Change”

If you change the line

```
score = score + 1;
```

to

```
score = score + 5;
```

What will happen each time the player touches the coin?

☒ **Answer:** The score will increase by 5 instead of 1.

4. Multiple Choice

Why does the program use `randomNumber(50, 350)` after a collision?

- A. To make the coin move randomly so the player can collect it again.
- B. To stop the game.
- C. To make the player move faster.
- D. To reset the score.

✓ **Answer:** A

5. Open-ended (Short Answer)

Explain what would happen if the conditional `if (player.isTouching(coin))` were removed from the program.

✓ **Answer:** The score would never increase because the code that checks for a collision would never run. The coin would stay in one place.

6. Debugging / Error Spotting

A student writes this line:

```
if (player.isTouching(coin));
```

What mistake do they make?

✓ **Answer:** The semicolon ends the `if` statement too early — the code after it will run **every time**, not just when the sprites touch.

7. Multiple Choice

Which of the following would correctly make the coin **disappear** when touched instead of moving?

- A. `coin.visible = false;`
- B. `delete coin;`
- C. `coin = false;`
- D. `hide(coin);`

✓ **Answer:** A