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Understanding the Differences Is Accepting

Prior art

Wat

A lightning talk by Gary Bernhardt from CodeMash 2012

```
failbowl:~(master!?) $ jsc
 > [] + []
 > [] + {}
 [object Object]
 > {} + []
 0
 > {} + {}
2:29 / 4:17
```

```
switch (0) {
    case 0:
        a();
        break;

case 1:
    function a() { console.log("foo"); }
    break;
}
```

What's the output?

- 1. "foo"
- 2. a is not defined

```
switch (0) {
    case 0:
        a();
        break;

case 1:
    function a() { console.log("foo"); }
    break;
}
```

- 1. the switch body creates a new scope
- 2. cases are not creating a new scope
- 3. function declarations are hoisted

```
1 switch (0) {
      case 0:
2
           a();
3
           break;
4
5
      case 1: { // <--
6
           function a() { console.log("foo"); }
7
           break;
8
      } // <--
9
10 }
```

1 "\n\t\r\n\t\r" == false

What's the output?

- 1. true
- 2. false
- 3. $x > \infty$

```
"\n\t\r\n\t\r" == false
```

- 1. \t, \n and \r are expanded to empty string
- 2. empty string is falsy

NaN == NaN

What's the output?

- 1. true
- 2. true (because it can't be false)

Unrepresentable/broken value

6.1.6 The Number Type

"[...] all NaN values are indistinguishable from each other."

7.2.15 Strict Equality Comparison

"2.a If x is NaN, return false or 2.b If y is NaN, return false."

1 Math.pow(2, 53) + 1 = Math.pow(2, 53)

What's the output?

- 1. true
- 2. false
- 3. quantum state

6.1.6 The Number Type

- 1. Number are 64 bits float
- 2. 11 bits are for the exponent
- 3. -2^{53} to $+2^{53}$

$$[1, 2] = '1,2'$$

What's the output?

- 1. true
- 2. false

```
1 [1, 2] == '1,2'
```

7.2.14 Abstract Equality Comparison

"9. If $\mathsf{Type}(\mathsf{x})$ is Object and $\mathsf{Type}(\mathsf{y})$ is either [...], return the result of the comparison $\mathsf{ToPrimitive}(\mathsf{x}) == \mathsf{y}$."

and then basically [1, 2].toString().

```
_1 < !-- console.log("foo") --->
```

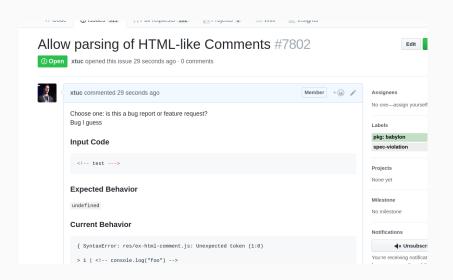
What's the output?

- 1. "foo"
- 2. parse error (because I'm a JS engine?)
- 3. no output?

Parsing is defined at B.1.3 HTML-like Comments.

Allow browsers that didn't understand the script tag to degrade gracefully

ex Netscape 1



```
1 var t
2
3 t = 0
4 (1 + 1)
```

What's the output?

- 1. 1
- 2. 0 is not a function (because that's the truth)

```
var t

t t = 0

(1 + 1)
```

11.9 Automatic Semicolon Insertion

No ASI because "[...] the parenthesized expression that begins the second line can be interpreted as an argument list for a function call."

Fix

Clearer Fix

bitcoin: {}{}{}{}{}{}{}{}{}

What's the output?

1. Mining bitcoins?

Spec

bitcoin: {}{}{}{}{}{}{}{}{}

bitcoin is a label forming a LabeledStatement

Following by BlockStatements

aka the blockchain

Conclusion

Everything is specified!

Don't let me commit on your project

Thanks