Problem Wk.5.1.1: More expressions

For each of the expressions below, specify its type and value. If it generates an error, select type noneType and put the word error in the box for the value. Assume we've made the following assignments:

```
> a = 'hi'
> x = [1,2,[3,'John',4],'Hi']
```

1. a
   noneType
   int
   float
   boolean
   function
   string
   list
   tuple

2. a[0]
   noneType
3. a[1]
   noneType
4. a[2]
   noneType
5. x[0]
   noneType
6. x[2]
   noneType
7. x[-1]
   noneType
8. x[2][2]
   noneType
9. x[2][-1]
   noneType
10. x[-1][2]
    noneType
11. x[0:1]
    noneType
12. x[0:-1]
    noneType
13. len(x)
    noneType
14. (a, b, c, d) = x
    noneType
15. range(3)
    noneType
16. range(3,10)
    noneType
17. range(3,10,3)
    noneType
18. range(10,3)
    noneType
19. range(10,3,-1)
    noneType
20. range(len(x))
    noneType
21. 'hi' == 'Hi'
    noneType
22. 2 in x
    noneType
23. 3 in x
    noneType
24. 'John' in x
    noneType
25. 'Hi' in x
    noneType
26. sum(range(4))
    noneType
27. [x for x in range(3)]
    noneType
28. [x*2 for x in range(3)]
    noneType
29. sum([x*2 for x in range(3)])
    noneType
30. [-x for x in [8, 2, 1]]
    noneType
31. def fizz(x): return x + 1

This problem contains one or more multiple-choice questions. When a given set of choices is used for the first time, all choices are displayed. If there are several related questions, you can assume that the same choices are available for all questions.
32. \[\{\text{fizz(fizz(x))} \mid x \in [8, 2, 1]\}\text{noneType}\]

32. \[\{x \mid x \in \text{range}(10) \text{ and } x \mod 2 == 0\}\text{noneType}\]