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BSCS 3 - 2
2021-01335
DBTK

1. Simulate the expressions using your code (hand written).

Program 1:

$$a = 2, c = 1, e = 5, g = 4, h = 0$$

$$z = a * 4 \% c - 2 / e + 2 * g - h / 1$$

play(z)

Simulation:

$$z = (2 * 4) \% 1 - 2 / 5 + (2 * 4) - 0 / 1$$

$$z = 8 \% 1 - 2 / 5 + 8 - 0 / 1$$

$$z = 0 - 2 / 5 + 8 - 0 / 1$$

$$z = 0 - 0.4 + 8 - 0 / 1$$

$$z = 0 - 0.4 + 8 - 0$$

$$z = -0.4 + 8 - 0$$

$$z = 7.6 - 0$$

$$\boxed{z = 7.6}$$

Program 2:

$$a = 6, c = 2, f = 0, i = 5$$

$$y = 8 / 2 * a \% 3 + e - f * 4 / 2 + i$$

play(y)

Simulation:

$$y = 8 / 2 * 6 \% 3 + 2 - 0 * 4 / 2 + 5$$

$$y = 4 * 6 \% 3 + 2 - 0 * 4 / 2 + 5$$

$$y = 24 \% 3 + 2 - 0 * 4 / 2 + 5$$

$$y = 0 + 2 - 0 * 4 / 2 + 5$$

$$y = 0 + 2 - 0 / 2 + 5$$

$$y = 0 + 2 - 0 + 5$$

$$y = 2 - 0 + 5$$

$$y = 2 + 5$$

$$\boxed{y = 7}$$

Program 3:

$$a = 9, d = 5, e = 6, h = 4, i = 2$$

$$x = a - (4 / 2) + d \% e * 3 + 2 - (h / i)$$

play(x)

Simulation:

$$x = 9 - (4 / 2) + 5 \% 6 * 3 + 2 - (4 / 2)$$

$$x = 9 - 2 + 5 \% 6 * 3 + 2 - 2$$

$$x = 9 - 2 + 5 * 3 + 2 - 2$$

$$x = 9 - 2 + 15 + 2 - 2$$

$$x = 7 + 15 + 2 - 2$$

$$x = 22 + 2 - 2$$

$$x = 24 - 2$$

$$\boxed{x = 22}$$

2. Run your compiler and display the output to validate your simulation.

Program 1:

```
Terminal
7.6
```

Program 2:

```
Terminal
7.0
```

Program 3:

```
Terminal
22.0
```

3. Submit the screenshot of your code.

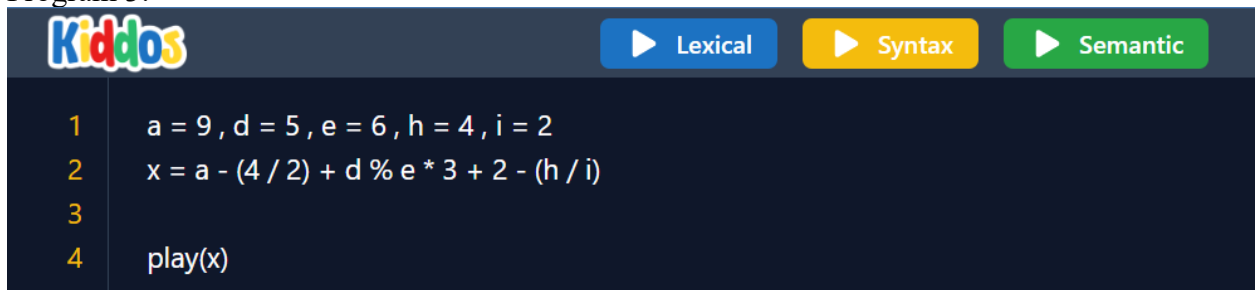
Program 1:

```
Kiddos [Lexical] [Syntax] [Semantic]
1 a = 2 , c = 1 , e = 5 , g = 4 , h = 0
2 z = a * 4 % c - 2 / e + 2 * g - h / 1
3 play(z)
```

Program 2:

```
Kiddos [Lexical] [Syntax] [Semantic]
1 a = 6 , e = 2 , f = 0 , i = 5
2 y = 8 / 2 * a % 3 + e - f * 4 / 2 + i
3 play(y)
```

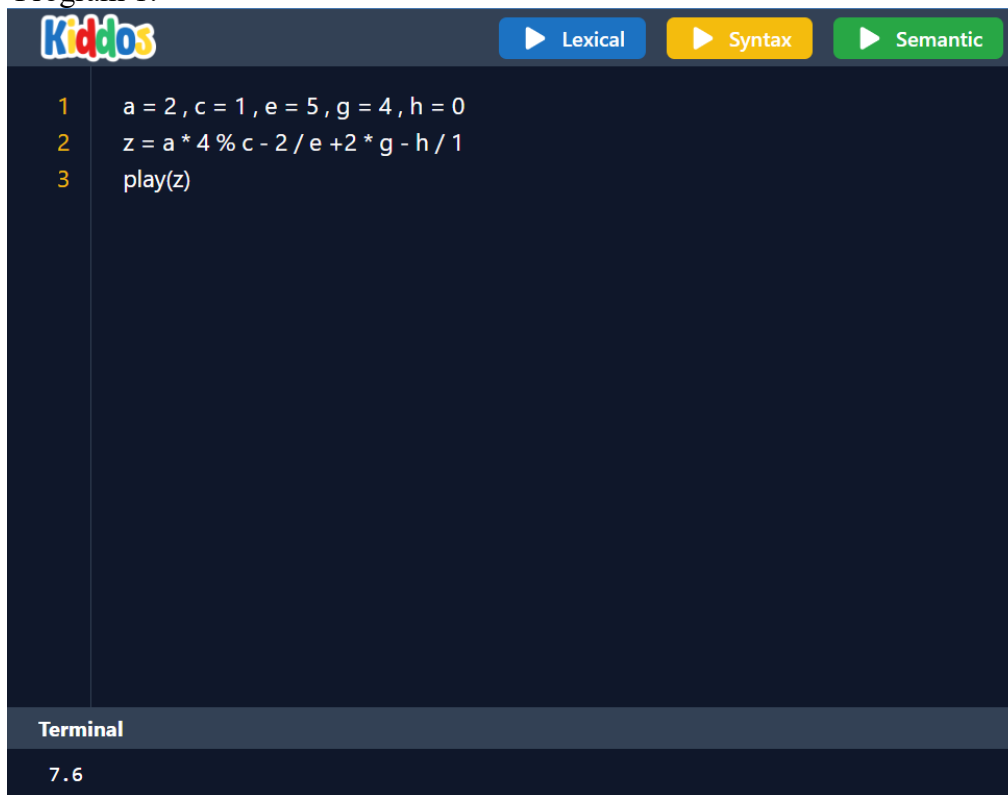
Program 3:



```
1 a = 9 , d = 5 , e = 6 , h = 4 , i = 2
2 x = a - (4 / 2) + d % e * 3 + 2 - (h / i)
3
4 play(x)
```

4. Submit the screenshot of your output after running your compiler.

Program 1:



```
1 a = 2 , c = 1 , e = 5 , g = 4 , h = 0
2 z = a * 4 % c - 2 / e + 2 * g - h / 1
3 play(z)
```

Terminal

7.6

Program 2:

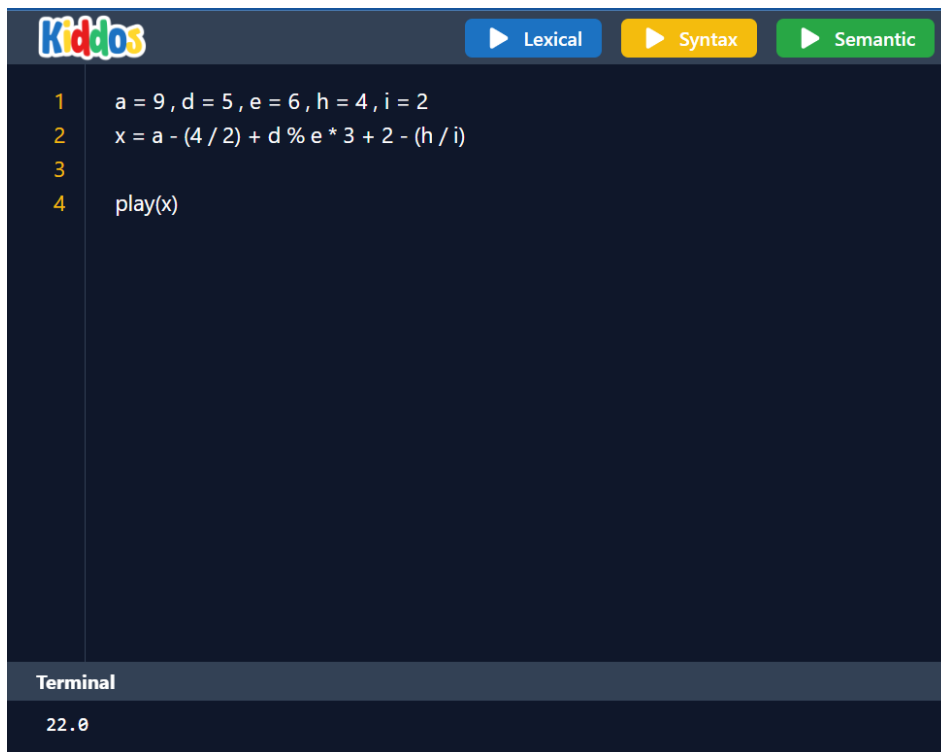


```
1 a = 6, e = 2, f = 0, i = 5
2 y = 8 / 2 * a % 3 + e - f * 4 / 2 + i
3 play(y)
```

Terminal

7.0

Program 3:



```
1 a = 9, d = 5, e = 6, h = 4, i = 2
2 x = a - (4 / 2) + d % e * 3 + 2 - (h / i)
3
4 play(x)
```

Terminal

22.0