

# Prep 10 quiz: Expression Trees

**Due** Nov 20 at 10am **Points** 5 **Questions** 3

**Available** Nov 15 at 9pm - Dec 31 at 10am about 2 months

**Time Limit** None

**Allowed Attempts** Unlimited

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## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	9 minutes	1.67 out of 5

⚠ Correct answers are hidden.

Score for this attempt: **1.67** out of 5

Submitted Nov 18 at 11:57pm

This attempt took 9 minutes.

Partial

Question 1

0.67 / 1 pts

In this week's prep readings, we introduced three classes: `Expr`, `Num`, and `BinOp`.

Select all of the true statements about the relationship between these classes.

- ☒ `Num` is a subclass of `Expr`.
- ☒ `BinOp` has one or more attributes that refer to other `Expr` instances.
- ☒ `BinOp` is a subclass of `Expr`.
- ☐ `Num` is a subclass of `BinOp`.
- ☒ `Num` has one or more attributes that refer to other `Expr` instances.

## Question 2

1 / 1 pts

Match each expression class with its description.

**Expr**

An abstract class representin

**Num**

A class representing a numer

**BinOp**

A class representing a binary

Incorrect

## Question 3

0 / 3 pts

For each of the Python expressions below, show how to represent that expression as an Expr instance (using some combination of Nums and BinOps).

We have done the first one for you.

**NOTE: The grading is picky about formatting here. Make sure you follow these rules when entering your expressions:**

- Use proper spelling, including capitalization
- Check your parentheses carefully.
- Use *single-quotes* for your strings, e.g., use '-' instead of "-".
- Include a single space after every comma. Do not include any other spaces.

You may find it easier to type your answers into PyCharm first, then copy-and-pasted them into the quiz.

Python expression	Expr instance
3	Num(3)
3 + 4	BinOps(Num(3), '+',
(3 + 4) * 6	BinOps(BinOps(Nur
1.1 + (2.2 + (3.3 + 4.4))	Binops(Num(1.1), '+'

**Answer 1:**

BinOps(Num(3), '+', Num(4))

**Answer 2:**

BinOps(BinOps(Num(3), '+', Num(4)), '\*', Num(6))

**Answer 3:**

Binops(Num(1.1), '+', BinOps(Num(2.2), '+', Binops(Num(3.3), '+',  
Num(4.4))))

Quiz Score: **1.67** out of 5

