XC++04b - Classes and Objects

Due Sep 29 at 11:59pm **Points** 14 **Questions** 8 **Available** Sep 16 at 12am - Oct 6 at 11:59pm 21 days
Time Limit None **Allowed Attempts** 4

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Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	50 minutes	7.86 out of 14

Score for this attempt: **7.86** out of 14
Submitted Sep 26 at 3:08pm
This attempt took 50 minutes.

Question 1

0.86 / 1 pts

Complete the following class

```
class Fraction {
          [ private ]
:
  int num, den;
          [ public ]
:
          [ Fraction() ]
() { num = 1; den = 2; }
          [ Fraction ]
(int n, int d) :          [ num ]
(n),                      [ den ]
(d) {}
}         [ ; ]
```

Answer 1:

Correct! private

Answer 2:

Correct! public

Answer 3:

You Answered Fraction()

Correct Answer Fraction

Answer 4:

Correct! Fraction

Answer 5:

Correct! num

Answer 6:

Correct! den

Answer 7:

Correct! ;

Question 2

0 / 1 pts

```
class Thing {
  public Thing() { }
};
```

Which of the following are valid calls to initialize object t?

You Answered ☑ t.Thing();

Correct! ☑ Thing t = Thing();

☐ Thing t();

☐ Thing(t);

Correct Answer ☐ Thing t;

Thing t(5);

Question 3

2 / 2 pts

The method below should return the product of two fractions without changing either one. What should then go in the blanks?

```
class Fraction {
  ...
public:
  Fraction mult(  [const]

 Fraction& f)  [const]

 {
    return Fraction(this->num * f.num, this->den * f.den);
  }
};
```

Answer 1:

Correct! const

Answer 2:

Correct! const

Question 4

1 / 3 pts

Complete the following method to print a Fraction and then go to a new line.

```
class Fraction {
  ...
  public  [int num, den;]

 print() const {
              [cout]

 << num << " / " << den <<
['\n']
```

```
;
   }
};
```

Answer 1:

You Answered: int num, den;

Correct Answer: void

Answer 2:

Correct!: cout

Correct Answer: std::cout

Answer 3:

You Answered: '\n'

Correct Answer: "\n"

Correct Answer: endl

Question 5

1 / 1 pts

What does the ampersand in the following method do?

```
Fraction add(const Fraction& f) const {
   ...
}
```

- Cause an error
- Correct! Tell the computer to only reference Fraction f instead of creating a copy
- Tell the computer to make a copy of Fraction f for the method
- Specify that Fraction f is not changed in the method

Question 6

1 / 1 pts

What can a friend method of a class access?

- public entities
- anything except those specified private
- Correct! anything a method in the class can access

Question 7

2 / 4 pts

The following method adds two Fractions but is found outside the Fraction class:

```
Fraction add(const Fraction& f1, const Fraction& f2)
 {
  ...
}
```

What should go inside this Fraction class to give the above method access to the necessary entities? (If nothing, write "nothing" without quotes)

```
class Fraction {
                public:

 Fraction add(              const Fraction&

 f1,                  const Fraction&

 f2)                  {}

;
};
```

Answer 1:

You Answered: public:

Correct Answer: friend

Answer 2:

Correct! const Fraction&

Answer 3:

Correct! const Fraction&

Answer 4:

You Answered {}

Correct Answer nothing

Question 8

0 / 1 pts

How should the diameter of a Ball be set when a Ball is instantiated?

(No spaces)

```
class Ball {
private:
  const int diameter;
public:
  Ball(int d)
 { }
};
```

diameter(d)

Answer 1:

You Answered diameter(d)

Correct Answer :diameter(d)

Correct Answer : diameter(d)

Quiz Score: **7.86** out of 14