

```
prime, a0=false,a1=false,a2=false,a3=false;

(%i1) t1: (not a3) and (not a2) and a1;
(%o1)  ~a3 & ~a2 & a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 & a2 & a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 & a1 & a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 & ~a1 & a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 & ~a2 & a1 V ~a3 & a2 & a0 V ~a2 & a1 & a0 V a2 & ~a1 & a0

(%i6) prime, a0=false,a1=false,a2=false,a3=false;
(%o6)  false
```

1. The answer is false because 0 is not a prime number.

```

prime, a0=true,a1=false,a2=false,a3=false;

(%i1) t1: (not a3) and (not a2) and a1;
(%o1)  ~a3 ∧ ~a2 ∧ a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0=true,a1=false,a2=false,a3=false;
(%o6)  false

```

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2. The answer is false because 1 is not a prime number.

```

prime, a0=false,a1=true,a2=false,a3=false;

(%i1) t1: (not a3) and (not a2) and a1;
(%o1)  ~a3 ∧ ~a2 ∧ a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0=false,a1=true,a2=false,a3=false;
(%o6)  true

```

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3. The answer is true because 2 is a prime number.

```

prime, a0=true, a1=true, a2=false, a3=false;

(%i1) t1: (not a3) and (not a2) and a1;
(%o1)  ~a3 ∧ ~a2 ∧ a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0=true, a1=true, a2=false, a3=false;
(%o6)  true

```

Yanwi

4. The answer is true because 3 is a prime number.

```

prime, a0=false, a1=false, a2=true, a3=false;

(%i1) t1: (not a3) and (not a2) and a1;
(%o1)  ~a3 ∧ ~a2 ∧ a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0=false, a1=false, a2=true, a3=false;
(%o6)  false

```

Yanwi

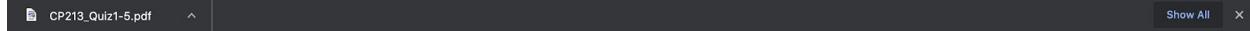
5. The answer is false because 4 is not a prime number

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6. The answer is true because 5 is a prime number.

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7. The answer is false because 6 is not a prime number.

Lab 4 - Computer algebra exam | pi\_phase\_II - CP-220-PC-220 | CESGA - Maxima on line | CP220 Lab 4 - Google Docs | +

Not Secure | maxima.cesga.es/index.php?c=twjzp5rav00koxtvbkb55&n=9

```
prime, a0 = true, a1 = true, a2 = true, a3 =false;
```

**Clic** **Clear**

AVISO LEGAL

---

```
(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0 = true, a1 = true, a2 = true, a3 =false;
(%o6)  true
```

Yanwi

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### 8. The answer is true because 7 is a prime number

Lab 4 - Computer algebra exam | pi\_phase\_II - CP-220-PC-220 | CESGA - Maxima on line | CP220 Lab 4 - Google Docs | +

Not Secure | maxima.cesga.es/index.php?c=twjzp5rav00koxtvbkb55&n=10

```
prime, a0 = true, a1 = false, a2 = false, a3 =true;
```

**Clic** **Clear**

AVISO LEGAL

---

```
(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0 = true, a1 = false, a2 = false, a3 =true;
(%o6)  false
```

Yanwi

CP213\_Quiz1-5.pdf

Show All X

### 9. The answer is false because 8 is not a prime number.

The screenshot shows a web browser window with three tabs open:

- pi\_phase\_II - CP-220-PC-220
- CESGA - Maxima on line
- CP220 Lab 4 - Google Docs

The Maxima on line tab contains the following Maxima session output:

```
prime, a0 = false, a1 = true, a2 = false, a3 =true;
(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1
(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0
(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0
(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0
(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0
(%i6) prime, a0 = false, a1 = true, a2 = false, a3 =true;
(%o6)  false
```

Below the browser window, there is a link labeled "Yanwi".

10. The answer is false because 9 is not a prime number.

The screenshot shows a web browser window with three tabs open:

- pi\_phase\_II - CP-220-PC-220
- CESGA - Maxima on line
- CP220 Lab 4 - Google Docs

The Maxima on line tab contains the following Maxima session output:

```
prime, a0 = true, a1 = false, a2 = false, a3 =true;
(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1
(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0
(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0
(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0
(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0
(%i6) prime, a0 = true, a1 = false, a2 = false, a3 =true;
(%o6)  false
```

Below the browser window, there is a link labeled "Yanwi".

11. The answer is false because 10 is not a prime number

The screenshot shows a web browser window with three tabs open:

- pi\_phase\_JI - CP-220-PC-220
- CESGA - Maxima on line
- CP220 Lab 4 - Google Docs

The Maxima tab displays the following output:

```
prime, a0 = true, a1 = true, a2 = false, a3 =true;
(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1
(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0
(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0
(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0
(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0
(%i6) prime, a0 = true, a1 = true, a2 = false, a3 =true;
(%o6)  true
```

Below the browser window, the text "Yanwi" is visible.

12. The answer is true because 11 is a prime number

The screenshot shows a web browser window with three tabs open:

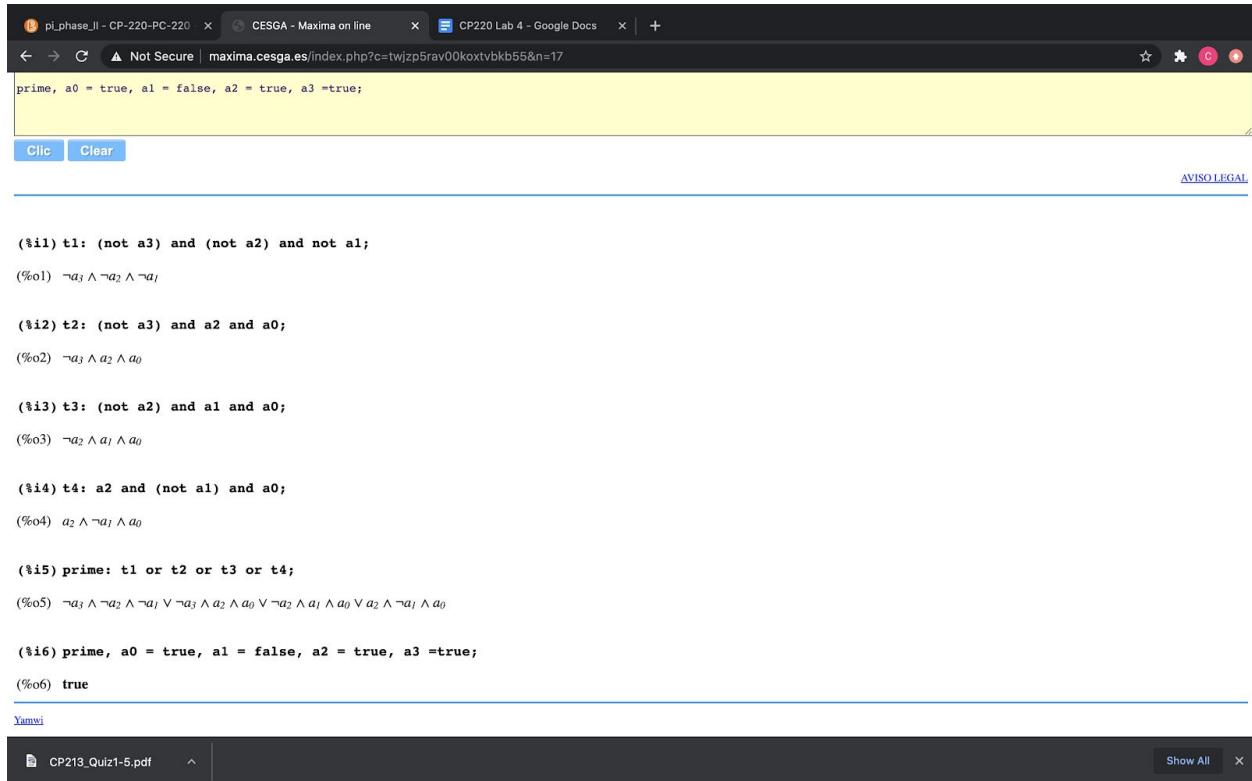
- pi\_phase\_JI - CP-220-PC-220
- CESGA - Maxima on line
- CP220 Lab 4 - Google Docs

The Maxima tab displays the following output:

```
prime, a0 = false, a1 = false, a2 = true, a3 =true;
(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1
(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0
(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0
(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0
(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0
(%i6) prime, a0 = false, a1 = false, a2 = true, a3 =true;
(%o6)  false
```

Below the browser window, the text "Yanwi" is visible.

13. The answer is false because 12 is not a prime number.



```
prime, a0 = true, a1 = false, a2 = true, a3 =true;

(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

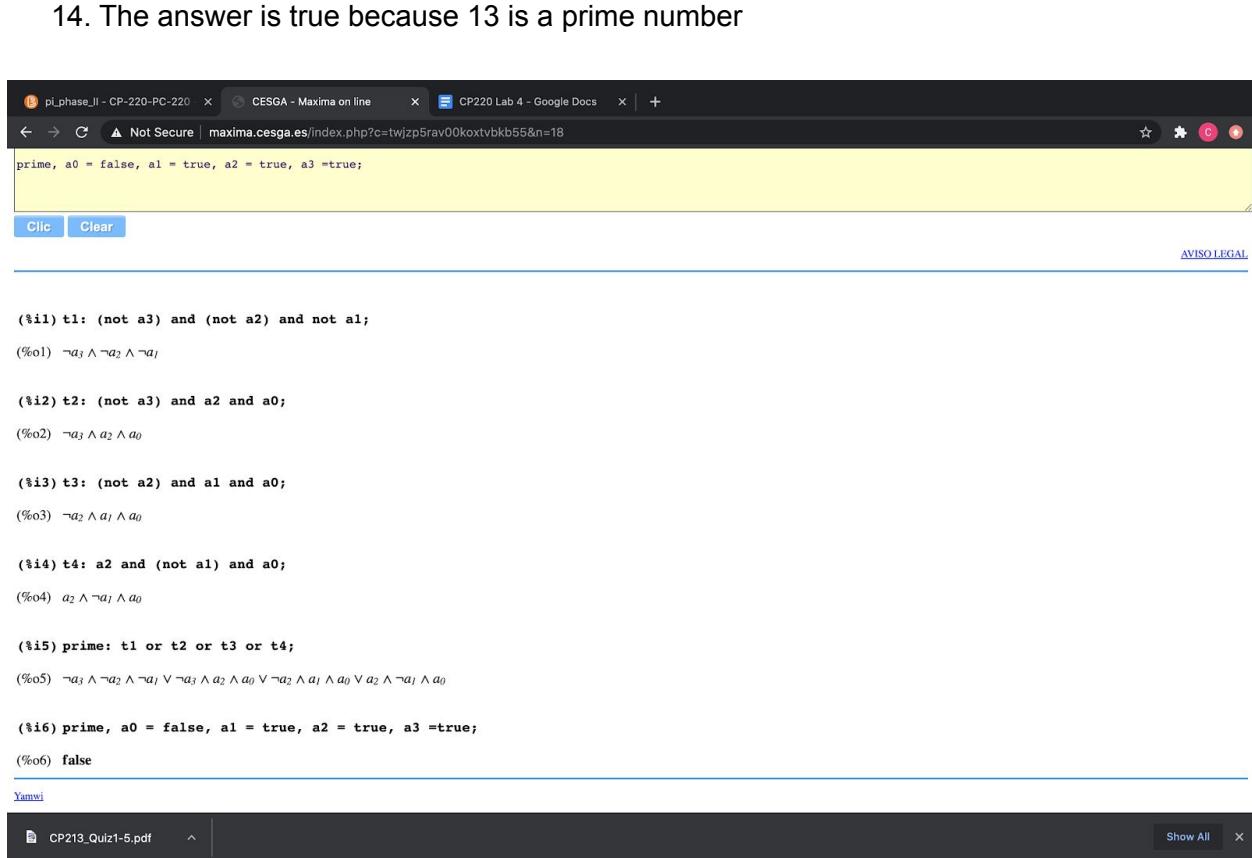
(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0 = true, a1 = false, a2 = true, a3 =true;
(%o6)  true
```

Yanwi



```
prime, a0 = false, a1 = true, a2 = true, a3 =true;

(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0 = false, a1 = true, a2 = true, a3 =true;
(%o6)  false
```

Yanwi

15. The answer is false because 14 is not a prime number

The screenshot shows a web browser window with three tabs open:

- pi\_phase\_II - CP-220-PC-220
- CESGA - Maxima on line
- CP220 Lab 4 - Google Docs

The Maxima session window contains the following code and output:

```
prime, a0 = true, a1 = true, a2 = true, a3 =true;
(%i1) t1: (not a3) and (not a2) and not a1;
(%o1)  ~a3 ∧ ~a2 ∧ ~a1

(%i2) t2: (not a3) and a2 and a0;
(%o2)  ~a3 ∧ a2 ∧ a0

(%i3) t3: (not a2) and a1 and a0;
(%o3)  ~a2 ∧ a1 ∧ a0

(%i4) t4: a2 and (not a1) and a0;
(%o4)  a2 ∧ ~a1 ∧ a0

(%i5) prime: t1 or t2 or t3 or t4;
(%o5)  ~a3 ∧ ~a2 ∧ ~a1 ∨ ~a3 ∧ a2 ∧ a0 ∨ ~a2 ∧ a1 ∧ a0 ∨ a2 ∧ ~a1 ∧ a0

(%i6) prime, a0 = true, a1 = true, a2 = true, a3 =true;
(%o6)  false
```

Below the Maxima window, there is a PDF viewer showing a file named "CP213\_Quiz1-5.pdf".

16. The answer is false because 15 is not a prime number