

QUIZ 1 KEY

QUIZ 1

Consider the following four statements:

Can I say that  $7 \times 3 + 1 = 15$ ?

$7 \times 3 + 1 = 15$  might be true; I'm not sure.

It is true to say that it is false to say that  $7 \times 3 + 1 = 15$ .

Consider a real number  $z$ .

How many of these statements can you safely write?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4**

Consider the following four statements:

- (a) If 5 is even then 6 is even.
- (b) If 5 is even then 6 is odd.
- (c) If 5 is odd then 6 is even.
- (d) If 5 is odd then 6 is odd.

Which one of these statements is false?

- A. (a)
- B. (b)
- C. (c)
- D. (d)

Consider the following four statements:

- (a) Let  $i$  be an integer.
- (b) Let  $t$  be an integer.
- (c) Let  $x$  be an integer.
- (d) Let  $\beta$  be an integer.

Which one would you say is the most appropriate?

- A. (a)
  - B. (b)
  - C. (c)
  - D. (d)
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Consider the following three statements:

- (a) Consider two integers  $i$  and  $j$ . Assume  $i \neq j$ .
- (b) Consider two integers  $i$  and  $j$ . We have  $i \neq j$ .
- (c) Consider two integers  $i$  and  $j$ . We may have  $i \neq j$ .

How many of these statements can you safely write?

- A. 0
- B. 1
- C. 2
- D. 3

Mary wrote:  Consider an integer $n$ : $7n+1=15$ $n=2$	John wrote:  Consider an integer $n$ : if $7n+1=15$ then $n=2$
Anna wrote:  There is an integer $n$ such that: $7n+1=15$	
Steve wrote:  For all integers $n$ , we have: $7n+1 \neq 15$	

How many of the four students above have it right?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

Consider the sets  $U=\{0,1\}$  and  $V=\{0,1,2\}$  and the statements:

- U is a subset of V.
- U is an element of V.
- U belongs to V.
- V includes U.
- V contains U.

How many of these five statements are correct?

- A. 1
  - B. 2
  - C. 3
  - D. 4
  - E. 5
- 

Consider the following three statements:

- $0..0 = (0,0)$
- $0..0 = \{0,0\}$
- $0..0 = [0,0]$

How many of these statements are correct?

- A. 0
  - B. 1
  - C. 2
  - D. 3
-

Consider the following three statements:

$$-\infty..+\infty = \mathbb{R}$$

$$1..+\infty = \mathbb{N}$$

$$1..2 = 2..1$$

How many of these statements are correct?

**A. 0**

**B. 1**

**C. 2**

**D. 3**

Consider the following four statements:

$$[-\infty, 0[ = \mathbb{R}^-$$

$$[4, 4] = \{4\}$$

$$[4, 4[ = \emptyset$$

$$]4, 5[ = \{ \}$$

How many of these statements are correct?

**A. 0**

**B. 1**

**C. 2**

**D. 3**

**E. 4**

Consider the following four statements:

- 1 is the first term of the tuple.
- 1 is the first element of the tuple.
- 1 is the first term of the set.
- 1 is the first element of the set.

How many of these statements may be correct?

- A. 0
  - B. 1
  - C. 2
  - D. 3
  - E. 4
- 

Let  $A$  be a nonempty set. Consider the following three statements:

- $\{ \} \times A = A$
- $A \times A = A^2$
- $(A \times A) \times A = A^3$

How many of these statements are correct?

- A. 0
  - B. 1
  - C. 2
  - D. 3
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