

**Sarajevo School of Science and Technology**

**Entrance Examination**

**2021**

**Mathematics**

Duration: 1,5 hours

Use of calculators: Allowed

**Candidate’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Department of study: Game Design and Development \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Mark Awarded: \_\_\_\_\_\_\_\_\_ Recommedation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Question 1.**

Mara runs faster than Gail.

Lily runs faster than Mara.

Gail runs faster than Lily.

If the first two statements are true, the third statement is

Top of Form

A. true  
B. false  
C. uncertain

Bottom of Form

**Question 2.**

Which number replaces the question mark?

1. 3 6 5 7 8 5 2
2. 7 6 1 8 8 4 ?

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a) 7

b) 8

c) 9

d) 6

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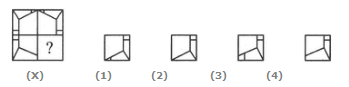
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**Question 3.**

In the following question, select a figure from amongst the four alternatives, which when placed in the blank space of figure (x) would complete the pattern.

Identify the figure that completes the pattern:



**Interview Questions**

[Typical Questions](http://www.theonlinetestcentre.com/typical-interview-questions.html)[Tough Questions](http://www.theonlinetestcentre.com/tough-interview-questions.html)[Surprising Questions](http://www.theonlinetestcentre.com/surprising-interview-questions.html)[Sudden Tests / Tasks at Interviews](http://www.theonlinetestcentre.com/sudden-interview-tests.html)[Situational Questions](http://www.theonlinetestcentre.com/situational-interview-questions.html)[Group Interview](http://www.theonlinetestcentre.com/group-interview-questions.html)[Behavioral Questions](http://www.theonlinetestcentre.com/behavioral-interview-questions.html)

**Gmat Test Advice and Questions**

[Quantitative Section](http://www.theonlinetestcentre.com/gmat-quantitative-section.html)[Verbal Section](http://www.theonlinetestcentre.com/gmat-verbal-section.html)[Test Advice](http://www.theonlinetestcentre.com/gmat-questions-advice.html)[Analytical Writing Assessment (AWA)](http://www.theonlinetestcentre.com/gmat-analytical-writing-assessment.html)

**General Knowledge**

[Periodic Table](http://www.theonlinetestcentre.com/periodic-table.html)[Fields of Study](http://www.theonlinetestcentre.com/sciences-studies.html)[Famous Inventors](http://www.theonlinetestcentre.com/famous-inventors-who-invented-what.html)

**Data Interpretation**

[Table Charts](http://www.theonlinetestcentre.com/table-charts.html)[Bar Charts](http://www.theonlinetestcentre.com/bar-charts.html)[Pie Charts](http://www.theonlinetestcentre.com/pie-charts.html)[Line Charts](http://www.theonlinetestcentre.com/line-charts.html)

**Others**

[Convert Metric Units](http://www.theonlinetestcentre.com/convert-metric-units.html)[Sudoku](http://www.theonlinetestcentre.com/sudoku-free.html)[Scuare and Cubic Conversions](http://www.theonlinetestcentre.com/square-cubic-conversion.html)[Close Menu](http://www.theonlinetestcentre.com/pattern-completion3.html)

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**Answer & Explanation:**

Answer: Option D

**Answer & Explanation:**Answer: Option D

a) 1,

b) 2

c) 3

d) 4



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**Question 4.**

Lana wants to colour one square of dimension 2×2 given in the figure.



In how many different ways she can do that?

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Top of FormBottom of Form

**Question 5.**

Suppose we are given the big rectangle in the figure. The lengths of the big rectangle have a ratio 3:5. It is divided into four smaller rectangles with the same area, as it can be seen in a figure. Evaluate the ratio of the lengths of the white rectangle.



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**Question 6.**

Number of negative integers which satisfy the inequality  is?

a) 0

b) 1

c) 2

d) 3

**Question 7.**

Evaluate the value of the expression:

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where *a* = -5.

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**Question 8.**

In a factory, machines A and B produce electronic components. Machine A produces 40% of components and machine B produces 60%. Some of the components are defective. Machine A produces 4% and machine B 3% defec-

tive components. Evaluate the probability that a randomly selected component

is defective.

**Question 9.**

Suppose that we are given a function . Find the domain of a function 

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**Question 10.**

Solve the system of equations:



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