



Testing Analyst Candidates

The written exam for a crime analyst position helps determine which candidates possess the necessary or desired knowledge and skills for the position. The written exam should cover the various duties that the analyst will be expected to perform. Each of the following sections tests the knowledge of the applicant to perform the duties of a crime analyst.

Statistics

An analyst needs to have at least a minimum level of knowledge with statistics to measure the performance of the agency and compare rates of crime. This section provides examples of questions that can be used to determine the level of knowledge that the candidate possesses to perform the statistical duties of an analyst.

Given a set of numbers, what is the mean, median, and mode?

- Sample: 9, 4, 2, 5, 7, 4, 2, 3, 4, 3, 4, 8, 6, 7, 8
 - Mean = 5.067
 - Median = 4
 - Mode = 4

Provide a set of crime statistics for a multi-year timeframe. Have the applicant determine the percentage change for certain crimes within a certain timeframe. Below are sample data and questions that can be included in this section.

2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Com Burglary	7	6	8	5	5	8	7	11	9	6	7	9	88
Res Burglary	13	15	11	12	7	5	3	5	4	9	8	11	103
Robbery	5	3	2	3	2	3	5	2	2	4	9	12	52
Rape	1	1	0	1	2	1	0	1	0	0	0	1	8
Auto Theft	6	8	4	5	8	12	10	8	5	7	6	7	86
Assault	2	3	2	1	0	2	3	0	1	2	2	3	21
Arson	0	0	1	1	0	1	2	2	4	1	0	0	12

2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Com Burglary	6	5	7	8	8	5	7	6	9	11	7	8	87
Res Burglary	12	9	11	12	9	13	11	9	8	10	12	7	123
Robbery	6	4	2	2	3	2	1	3	3	2	5	7	40
Rape	0	1	2	0	1	2	2	3	1	0	2	0	14
Auto Theft	3	5	4	3	6	8	11	12	9	8	3	2	74
Assault	3	1	2	3	2	0	1	2	0	3	2	3	22
Arson	1	0	1	0	2	1	2	1	0	2	1	0	11

- What is the percentage change in Robbery between 2008 and 2009?
 - -23%
- What is the percentage change in Residential Burglary between the last 6 months of 2008 and the last 6 months of 2009?
 - 42.5%



Download this sample data with solutions

- Analyze the Robbery crime category and discuss what you see. What inferences can be made from the data?
 - Robbery cases should be reviewed to determine what types of robberies are happening (bank, street, convenience stores, etc.) in order to see if there is an increase in one specific sub-type that is accounting for the overall rise.
 - Possible theory – Increase in Robbery in Nov. and Dec. of 2008 may be due to the holiday season. More people walking around with gifts and money provide more targets for offenders.
 - Possible theory – A known offender may have been released from custody in the fall of 2008 and/or arrested in early 2009 accounting for spike in Robberies in between.

Calculating Crime Rates

Determine the crime rate per 100,000 (the standard for UCR comparisons) given the following statistics:

- Robbery: 45, Population: 50,000
 - Answer: 90
- Auto Theft: 140, Population: 200,000
 - Answer: 70
- Assault: 114, Population: 250,000

- Answer: 45.6

Knowledge of Analysis

Understanding the main types of crime analysis and the benefits that each provides to the agency is essential for the successful candidate. The following questions are designed to test the candidate's general knowledge of crime analysis.

Which type of analysis describes the daily identification and analysis of emerging or existing crime patterns, including series and hot spots?

- Strategic crime analysis
- Administrative crime analysis
- **Tactical crime analysis**
- Intelligence analysis
- Operations analysis

Analyzing long-term crime trends, problems, and their causes is the focus of which type of analysis?

- Operations analysis
- Criminal investigative analysis
- Tactical crime analysis
- **Strategic crime analysis**
- Intelligence analysis

The study of demographic changes in a jurisdiction, preparation of Uniform Crime Reports, and the creation of crime information for presentation to City Council all fall under which type of analysis?

- **Administrative crime analysis**
- Problem analysis
- Tactical crime analysis
- Strategic crime analysis
- Intelligence analysis

Which type of analysis describes the study of a police department's own operations and policies, including its allocation of personnel, money, equipment, and other resources?

- Tactical crime analysis
- Administrative crime analysis
- **Operations analysis**
- Strategic crime analysis
- Problem analysis

Which type of analysis concentrates on the collection and dissemination of information about criminals, particularly organizations and conspiracies?

- Tactical crime analysis
- Administrative crime analysis
- Operations analysis
- Strategic crime analysis
- **Criminal intelligence analysis**

Two or more related crimes believed to be committed by the same offender or group of offenders is a:

- Spree
- Hot spot
- Signature crime
- **Series**
- Threshold offense

A statistical procedure designed to determine if there is a relationship between two variables is:

- Content analysis
- **Correlation**
- Concatenation
- Containment analysis
- Comparative assessment analysis

What is the process of translating addresses or numeric coordinates into points on a map. In law enforcement, this is mostly referred to as “address matching”:

- Geospatial reference
- Geosynthesis
- Geoanalysis
- **Geocoding**
- Geocaching

The acronym, “GIS” stands for:

- Geotechnical Information System
- Geographic Intelligence System
- Global Interdiction Society
- Global Intelligence Study
- **Geographic Information System**

- None of the above

An area of high crime, events that form a cluster, or a single place with many crimes all describe a:

- **Hot spot**
- Crime vortex
- Crime intensity sample
- Crime signature
- Correlational crime event
- Crime focal point

The process in which an analyst reviews police reports with the aim of identifying and analyzing a pattern of crimes that is believed to be committed by the same offender or offenders is called:

- Hot spot analysis
- **Crime series analysis**
- Crime sequence analysis
- Non-static analysis
- Crime pattern perspective

The acronym, "SARA" stands for:

- SAmple Regression Analysis
- **Scanning, Analysis, Response, Assessment**
- Send A Reoffender Away
- Stop, Assess, Reason, Action
- Signature Area Repeat Analysis

Which of the following is NOT a NIBRS Group A data segment?

- Offense
- Victim
- Property
- **Summary**
- Administrative

Which of the following is NOT a Part-I Crime?

- Murder
- Robbery
- Rape
- **Kidnapping**

- Theft

Practical Exercises

To test the candidate's skill level in Excel, have him/her produce a chart based on crime statistics. Provide the candidate a spreadsheet of crime statistics for a one or two year period and ask them to produce a chart that compares certain crime types within a certain timeframe.

Provide a scenario (incident reports or narrative describing a crime series) and have the applicant perform analysis on the information provided. The information should include a crime trend, pattern, or some commonality that gives the candidate the opportunity to show how they would relate the incidents (and not relate ones that don't have aspects in common).

Candidate work products could include a crime matrix, summary analysis narrative, or crime bulletin.

Forecasting – given a set of dates/times, have the candidate predict when the next crime in a series is likely to occur.

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