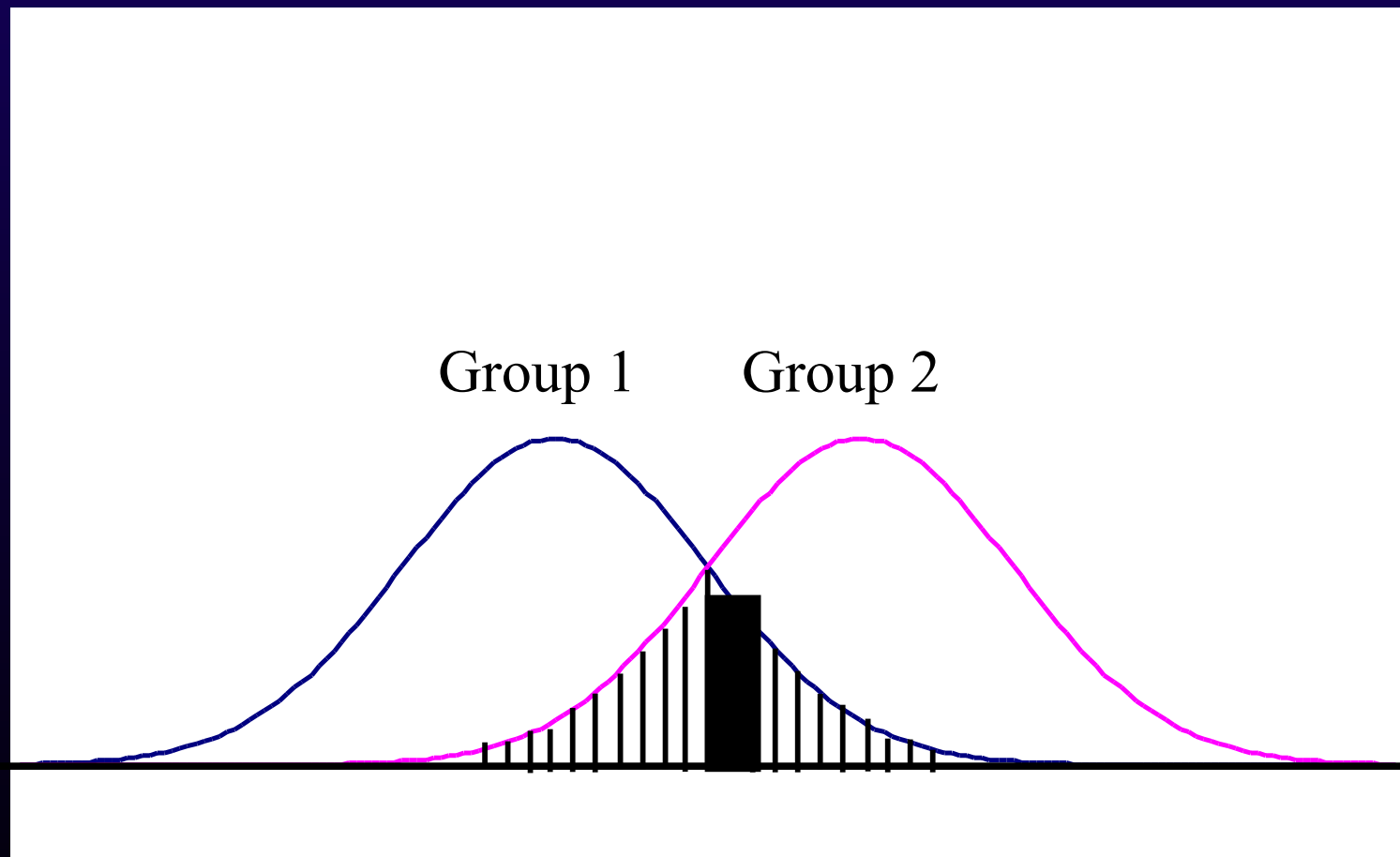

Adverse Impact

History, Concepts and Testing Concerns

Ted Darany & Kristine Smith
IPMAAC Conference
June 22, 2004

What Adverse Impact Looks Like



Defining Adverse Impact

A substantially different rate of selection that works to the disadvantage of members of race, gender, or ethnic group.

- 4/5ths or 80% rule violations
 - Statistical evidence
 - Statistical and practical considerations by the U.S. Department of Justice and courts
-

Adverse Impact Issues

- Adverse or disparate impact is not the same as disparate treatment which involves intent. Adverse impact may occur in facially neutral processes without specific intent.
 - The presence of adverse impact does not require the elimination of a selection procedure, but rather its justification as job-related.
 - Adverse impact may be determined from any individual component or element of a selection process.
-

History

- Civil Rights Act of 1964
 - Griggs v. Duke Power, 1971
 - Uniform Guidelines on Employee Selection Procedures, 1978
 - 1980's Cases (Connecticut v. Teal, Wards Cove, Watson)
 - Civil Rights Act of 1991
 - Paige v. State of California Highway Patrol, 2002
-

Civil Rights Act of 1964 - Title VII

- Prohibits discrimination in all terms and conditions of employment on the basis of race, color, religion, sex or national origin
- Requires that any employment decision based upon religion, sex or national origin be demonstrated to be a “bona fide occupational qualification reasonably necessary to the normal operation of that particular business”

Case Law

- Griggs V. Duke Power - 1971 U.S. Supreme Court
 - ▶ Established that it was the intent of Congress through the Civil Rights Act to prohibit “artificial, arbitrary, and unnecessary barriers to employment when the barriers operate invidiously to discriminate on the basis of racial or other impermissible classification.”
 - ▶ Established that discriminatory effect was the issue and that lack of discriminatory intent did not matter
 - ▶ Provided “business necessity” as the yardstick for assessing the legality of such standards, but did not provide additional guidance regarding the meaning of business necessity
-

The Uniform Guidelines on Employee Selection Procedures

- Adopted in 1978 by the EEOC, U.S. Civil Service Commission, Department of Labor, and Department of Justice
- Apply to all selection procedures used as a basis for any employment decision and are given deference by the courts
- States that procedures having adverse impact constitute discrimination unless justified
- Outlines standards for selection procedures
 - ▶ Establishing validity - job analysis, etc.
 - ▶ Use of selection procedures
 - ▶ Setting cut scores
 - ▶ Documentation
- Provides 4/5ths (80% rule) as a guideline

Significant Cases: 1980's

- **Connecticut v. Teal, U.S. 1982**
 - ▶ Rejected “bottom line argument”
 - ▶ Noted the need for “job-related criteria”
 - **Watson v. Fort Worth Bank & Trust, U.S. 1988**
 - ▶ Placed burden of proof on plaintiff at all times
 - ▶ Deviated from business necessity language to include “manifest relationship to employment” and “legitimate business reasons”
 - **Wards Cove Packing v. Antonio, U.S. 1989**
 - ▶ Reinforced Watson language: “legitimate employment goals of the employer”
-

Civil Rights Act of 1991 - Title I

- Requires demonstration of both job relatedness and business necessity of procedures that cause adverse impact
 - Defines process for establishing and addressing disparate impact
 - Prohibits score adjustments or practices that give consideration to race, color, religion, sex or national origin
-

Paige v. State of California

9th Circuit, 2002

- Determined that internal applicant pool was the appropriate comparison group, though allowed that there are circumstances in which an external pool might be appropriate
 - Affirmed that aggregating data (from different examinations and applicant sub-groups) was appropriate
-

Legal Framework Themes

- Job-relatedness
- Business necessity
- Documentation

EEOC Trend Data

	1992	2002
Title VII Lawsuits	242	246
Monetary Benefits (non-litigation)	\$52.5m	\$141.7m
Total Charges	73,302	84,442
Race	40.9%	35.4%
Sex	30.1%	30.2%
National Origin	10.3%	10.7%
Religion	1.9%	3.0%
Disability	1.4%	18.9%

80 Percent Rule Computations

- Compute the selection rate for each group by dividing the number hired by the total number of candidates
- Compute the impact ratio by dividing the selection rate of each group by the selection rate of the reference group (highest ranking or majority group)

Exercise

Instructions: Compute selection rates using the data shown in the handout.

Exercise

Computing Selection Rates and Impact Ratios

# of Candidates	#Hired	Selection Rate	Impact Ratio
20 White	5	$5/20 = .25 = 25\%$	*
9 Black	2	$2/9 = .22 = 22\%$	$.22/.25 = .88 = 88\%$
5 Hispanic	1	$1/5 = .20 = 20\%$	$.20/.25 = .80 = 80\%$
14 Female	4	$4/14 = .29 = 29\%$	*
20 Male	4	$4/20 = .20 = 20\%$	$.20/.29 = .69 = 69\%$

Strategies for Reducing Adverse Impact

Process Oriented

- “Chilling effects”
 - Recruitment outreach
 - Minimum qualifications
 - Training for process job experts and raters
-

Strategies for Reducing Adverse Impact

Examination Planning

- Identify and assess important, relevant knowledge, skills, and abilities
 - Assess the full range of KSAOs where possible (not solely cognitive components)
 - Assess specific KSAOs. Don't assess general cognitive ability if the job only requires a specific facet of it such as verbal comprehension or quantitative reasoning
-

Strategies for Reducing Adverse Impact

Examination Development

- Minimize the complexity of instructions
 - Minimize the reading level required
 - Enhance applicant perceptions
 - Provide sufficient time limits
 - Target difficulty level to mid-range
-

Written Test Item Considerations

- Sensitive to groups?
 - No stereotypes?
 - Unrelated knowledge or skill required?
 - Words or phrases with different meanings for different groups?
-

Perspective on Balancing Adverse Impact and Validity

- Do not eliminate adverse impact to the extent that you also eliminate validity: random selection produces no adverse impact
- Research has demonstrated that cognitive ability tests are among the best predictors for nearly all jobs
- Remember the benefits of effective selection and the value of valid tests
- Develop and document job-related processes

Exercise

- Review the test instructions provided.
 - Consider the applicable strategies for reducing adverse impact.
 - Make notations (or edits) to indicate improvements that would make the instructions more consistent with the strategies discussed.
-

Exercise Notes

- Start the instructions with something more positive and less officious in tone (Chilling)
 - Provide information in smaller chunks with more spacing & headings to present information in pieces that are easier to follow and process
 - Give more information about the test content and note the relationship between the test and the job
 - Use shorter sentences and smaller words
 - Make the time limit more reasonable
-

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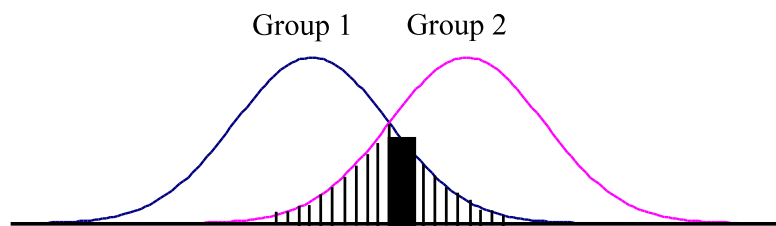
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What is Adverse Impact?

A substantially different rate of selection in hiring, promotion, or other employment decision that works to the disadvantage of members of a race, gender or ethnic group.

A view of adverse impact:
Distribution of test scores for two groups



How is the “substantially different rate of selection” determined?

By the U.S. Department of Justice and the Courts employing statistical and practical considerations:

- **The 80% (4/5ths) rule outlined in the Uniform Guidelines**
- **Other statistics (Significance tests, confidence intervals, standard deviations)**

Concerns: sample size, statistical power, ease of application

Some Key Distinctions

- **Adverse or disparate impact is not the same as disparate treatment which involves intent. Adverse impact may occur in facially neutral processes without specific intent.**
- **The presence of adverse impact does not require the elimination of a selection procedure, but rather its justification as job-related.**
- **Adverse impact may be determined from any individual component or element of a selection process.**

History

Title VII of the Civil Rights Act of 1964

Prohibits discrimination in all terms and conditions of employment on the basis of race, color, religion, gender, or national origin.

Makes it an unlawful employment practice to limit, segregate, or classify employees or applicants in any way that would deprive or tend to deprive any individual of employment opportunities because of race, color, religion, sex, or national origin.

Requires that considerations based on religion, sex, or national origin be “bona fide occupational qualifications” reasonably necessary to the normal operation of the business or enterprise.

Allows for use of professionally developed ability tests provided that, “such test, its administration of action upon the results is not designed, intended or used to discriminate because of race, color, religion, sex or national origin.”

Griggs v. Duke Power Co. (1971 U.S. Supreme Court)

Established the intent of Congress with regard to the Civil Rights Act of 1964 by stating that discriminatory effect (not intent) was the key consideration and that employment tests must be job related and consistent with business necessity.

“What is required by Congress is the removal of artificial, arbitrary, and unnecessary barriers to employment when the barriers operate invidiously to discriminate on the basis of racial or other impermissible classification.”

“The Act proscribes not only overt discrimination but also practices that are fair in form, but discriminatory in operation.”

“The touchstone is business necessity.”

“Congress has placed on the employer the burden of showing that any given requirement must have a manifest relationship to the employment in question....to require that employment tests be job related comports with congressional intent...What Congress has commanded is that any tests used must measure the person for the job and not the person in the abstract.”

“The administrative interpretation of the Act by the enforcing agency is entitled to great deference.”

The Uniform Guidelines on Employee Selection Procedures, 1978

Established the 80 percent rule as a guideline for determining adverse impact. Also provided documentation guidelines and considerations for enforcement agencies.

Uniform Guidelines 60-3.4D:

“A selection rate for any race, sex, or ethnic group which is less than four-fifths (or 80 percent) of the rate for the group with the highest rate will generally be regarded by Federal Enforcement Agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact. Smaller differences in selection rate may nevertheless constitute adverse impact where they are significant in both statistical and practical terms or where a user’s actions have discouraged applicants disproportionately on grounds of race, sex or ethnic group. Greater differences in selection rate may not constitute adverse impact where the differences are based on small numbers and are not statistically significant or where special recruiting or other programs cause the pool of minority or female applicants to be atypical of the normal pool of applicants from that group. Where the user’s evidence concerning the impact of a selection procedure indicates adverse impact but is based upon numbers which are too small to be reliable, evidence concerning the impact of the procedure over a longer period of time and/or evidence concerning the impact which the selection procedure had when used in the same manner in similar circumstances elsewhere may be considered in determining adverse impact. Where the user has not maintained data on adverse impact as required by the documentation section of applicable guidelines, the Federal enforcement agencies may draw an inference of adverse impact of the selection process from the failure of the user to maintain such data, if the user has an underutilization of a group in the job category, as compared to the group’s representation in the relevant labor market or, in the case of jobs filled from within, the applicable work force.”

Some significant language from the Uniform Guidelines:

- **“generally”**
- **“statistical and practical terms”**
- **“pool of minority and female applicants”**

Significant Cases from the 1980's

State of Connecticut v. Teal (1982 U.S. Supreme Court)

Rejected the “bottom line” argument regarding adverse impact and opened scrutiny to individual test components. Emphasized the right of the plaintiff group to have the “opportunity to compete equally with white workers on the basis of job-related criteria” and the need to demonstrate that examination was “not an artificial, arbitrary, or unnecessary barrier but measured skills related to effective performance as a supervisor.” Addressed analysis required to establish a prima facie case of discrimination (Plaintiff shows significant discriminatory impact, employer then must show manifest relationship to the job in question, plaintiff may still prevail by showing that the practice was used as a mere pretext for discrimination).

“Congress never intended to give an employer license to discriminate against some employees on the basis of race or sex merely because he favorably treats other members of the employees’ group.”

Watson v. Fort Worth Bank & Trust (1988 U.S. Supreme Court)

Court faced the issue of applying disparate impact analysis to subjective employment practices and concluded that such analysis was appropriate. However, the court recognized the concern that such a finding would result in quota systems and strongly stated that this was not the intent of Congress. In addressing this issue, the court considered the placement of the burden of proof and the nature of business necessity and job relatedness. The court held that:

“the ultimate burden of proving that discrimination against a protected group has been caused by a specific employment practice remains with the plaintiff at all times.”

“an employer has the burden of showing that any given requirement must have a manifest relationship to the employment in question....when the defendant has met its burden of producing evidence that its employment practices are based on legitimate business reasons, the plaintiff must show...”

Wards Cove Packing Company v. Antonio (1989 U.S. Supreme Court)

Addressed issue of defining the appropriate “pool of qualified job applicants”, reinforced the identification of specific practices (not bottom line), considered justifications for employment practices, defined the plaintiff’s burden, and addressed the use of alternative practices.

“it is generally well established that at the justification stage of such a disparate impact case, the

dispositive issue is whether the challenged practice serves in a significant way the legitimate employment goals of the employer.”

“The ultimate burden of proving that discrimination against a protected group has been caused by a specific employment practice remains with the plaintiff at all times.”

“any alternative practices which respondents offer up in this respect must be equally effective as petitioner’s chosen hiring procedures in achieving petitioner’s legitimate employment goals.”

Civil Rights Act of 1991

Reversed portions of Watson and Wards Cove with regard to the plaintiff’s burden and business necessity. Defined the process for establishing a prima facie case of discrimination based upon Title VII.

“An unlawful employment practice based on disparate impact is established...complaining party demonstrates that a respondent uses a particular employment practice that causes a disparate impact on the basis of... and the respondent fails to demonstrated that the challenged practice is job related for the position in question and consistent with business necessity.”

“It shall be an unlawful employment practice ...to adjust the scores of, use different cutoff scores, or otherwise alter the results of employment related tests on the basis of...”

The Legal Process

- **The plaintiff proves, usually through statistical comparisons, that the challenged selection process has adverse impact on a selection group.**
- **Upon the establishment of adverse impact, the employer must prove that the challenged practice is “job-related” for the position in question and consistent with “business necessity.”**
- **If the employer proves business necessity, the plaintiff may still prevail by showing that the employer refused to adopt an alternative employment practice which would satisfy the employer’s legitimate interests without having adverse impact on protected classes.**

Current Issues: Paige v. State of California Highway Patrol (Ninth Circuit)

At issue: the use of an external applicant pool as relevant labor force for comparisons and data analysis methodology (combining promotional exams and grouping non-white officers).

“the best evidence of discriminatory impact is proof that an employment practice selects members of a protected class...in a proportion smaller than in the actual pool of eligible employees.” ... However, we have also stated that this general principle is true only if there is not a “characteristic of the challenged selection device that makes the use of the actual pool of applicants or eligible employees inappropriate.”

“It is a generally accepted principle that aggregated statistical data may be used where it is more probative than subdivided data.....Such use is particularly appropriate where small sample size may distort the statistical analysis...the plaintiffs demonstrated...sufficient commonality among the duties and skills required by the various supervisory positions to justify aggregation.”

“the plaintiff should not be required to disaggregate the data into subgroups which are smaller than the groups which may be presumed to have been similarly situated and affected by common policies.”

Summary: Where We Stand

Though the Uniform Guidelines were established over twenty years ago, they remain the standard considered by the courts and continue to be defined through the legal process.

Some Trends

	1992	2002
Title VII Lawsuits filed by the EEOC	242	246
Monetary Benefits - not including litigation (Millions)	\$52.5	\$141.7
Total Charges (number of individual charge filings)	72,302	84,442
Race	40.9%	35.4%
Sex	30.1%	30.2%
National Origin	10.3%	10.7%
Religion	1.9%	3.0%
Disability	1.4%	18.9%

Determining Adverse Impact Using the 80 Percent Rule

Federal regulations require tracking the success of designated race, ethnic, and gender groups in order to determine if hiring and promotion processes have a disparate impact. Adverse impact analysis involves comparing the selection rate for each group with the group that has the highest selection rate through the use of an impact ratio. The Uniform Guidelines include a rule of thumb for interpreting these ratios that is referred to as the “4/5ths” or “80 percent” rule. According to the 80 percent rule, adverse impact may exist if the selection rate for one group is less than 80 percent of the selection rate of the group with the highest selection rate.

General Description of the Method

Adverse impact analysis involves comparing the selection rate for each protected group with the selection rate for the group that has the highest selection rate. The comparison of the two selection rates takes the form of dividing the lower selection rate by the larger selection rate to calculate the impact ratio. The impact ratio for a protected group will be a percentage, that is, it indicates what percentage of the larger selection rate the lower selection rate is.

Detailed Procedure With Example

Suppose that 28 candidates participate in a written examination and that 7 were hired. The ethnicity and gender information for the 28 candidates was tabulated and the data are reported in the table below. The first three rows present the information for the three significant ethnic groups represented in the candidate group and the last two rows present the information based on gender.

# of Candidates	# Hired	Selection Rate	Impact Ratio
15 White	4	$4/15 = 0.27 = 27\%$	not applicable
9 Black	2	$2/9 = 0.22 = 22\%$	$.22/.27 = 0.81 = 81\%$
4 Hispanic	1	$1/4 = 0.25 = 25\%$	$.25/.27 = 0.93 = 93\%$
12 Females	2	$2/12 = 0.17 = 17\%$	$.17/.31 = 0.55 = 55\%$
16 Males	5	$5/16 = 0.31 = 31\%$	not applicable

Exercise

Compute the selection rates and impact ratios for the candidate group shown in the table below.

# of Candidates	# Hired	Selection Rate	Impact Ratio
20 White	5		
9 Black	2		
5 Hispanic	1		
14 Females	4		
20 Males	4		

Strategies for Reducing Adverse Impact

Process Oriented

- **Ensure that nothing in the process produces a “chilling effect”.**
- **Consider recruitment outreach for qualified candidates.**
- **Employ appropriate minimum qualifications.**
- **Train raters and other experts involved in developing tests and rating candidates.**

Examination Planning

- **Identify and assess only important, relevant knowledge, skills and abilities.**
- **Assess the full range of KSAOs where possible (not solely cognitive components).**
- **Assess specific KSAOs. Don't assess general cognitive ability if you are really only targeting a specific facet of it, such as verbal comprehension or quantitative reasoning.**

Examination Development

- **Consider the complexity of instructions.**
- **Consider the reading level required. Note that it should be at the lowest level possible to convey meaning and that this may be lower than the level actually required on the job.**
- **Enhance applicant perceptions by describing the intent of test parts and using face-valid tests.**
- **Provide sufficient time limits.**
- **Target the difficulty level to the mid-range of difficulty (.50 - .75).**
- **?Consider the use of study guides and test preparation materials?**
- **?Item-level analysis?**

Written Test Item Considerations

- **Does the item include content that might be deemed offensive to members of an identifiable racial, cultural, ethnic, gender, religious, disability, or age group?**
- **Does the item perpetuate racial, cultural, ethnic, gender, religious, disability, age related stereotypes?**
- **If the item requires knowledge/skill not essential to the purpose of the test, are members of different subgroups equally likely to have had opportunities to learn it?**
- **Will words or phrases used in the item have different meanings for different subgroups?**

Perspective on Balancing Adverse Impact and Validity

- **Be careful to avoid working so hard to eliminate adverse impact that you significantly reduce the validity of your tests: random selection produces no adverse impact.**
- **Remember what research has demonstrated regarding the effectiveness of cognitive ability tests: they are among the best predictors for nearly all jobs.**
- **Remember the benefits of effective selection and the value of a valid test.**
- **Develop and document job-related selection processes.**

Exercise: The test instructions below are from a written test booklet for the classification of Entry Level Fire Fighter. Review the instructions, giving consideration to the strategies for reducing adverse impact. Make notations (or edits) to indicate improvements that would make the instructions more consistent with the strategies discussed.

**Entry Level Fire Fighter
Written Test**

Do not open this booklet until you are instructed to do so. The test administrator will announce when you may proceed and when you must cease working on the examination. Upon completion of the examination, this booklet, along with any other test materials, must be returned to the test administrator. During the conduct of the examination, any candidate who engages in activities or behaviors that are considered to be deceptive, fraudulent, or otherwise inappropriate in nature will be disqualified from the selection process.

You will be provided with one and one-half hours to complete the following components of this examination: interpretation of written materials, understanding verbal instructions, basic arithmetic computations, and mechanical reasoning. Each examination component consists of thirty questions.

All questions in this examination are presented in a multiple-choice format. Identify the correct response option and blacken the appropriate letter selection for the corresponding numbered item on the answer sheet. Ensure that test question numbers and answer sheet numbers correspond with one another and that any marks made in error are thoroughly removed.

Exercise Notes

Computation Exercise

# of Candidates	# Hired	Selection Rate	Impact Ratio
20 White	5	.25 = 25%	-
9 Black	2	.22 = 22%	.22/.25 = .88 = 88%
5 Hispanic	1	.20 = 20%	.20/.25 = .80 = 80%
14 Females	4	.29 = 29%	-
20 Males	4	.20 = 20%	.20/.29 = .69 = 69%

**Entry Level Fire Fighter
Written Test**

Thank you for your interest in the position of Fire Fighter with the City of Grandville. This test will evaluate your skills in four areas that are important for successfully performing the work of a Fire Fighter:

<u>Test Section</u>	<u>Description</u>	<u># of questions</u>
Reading with understanding	Answering questions based on written information about fire operations.	30
Understanding verbal instructions	Answering questions after listening to verbal instructions.	30
Basic arithmetic	Performing basic arithmetic computations commonly used in the fire service (addition, subtraction, multiplication, division)	30
Basic mechanical concepts	Answering questions that show your understanding of basic mechanical relationships and concepts	30

Instructions for answering questions

You will be provided with four answer choices, lettered A through D, for each question in this test. You should select the one best answer and then mark that answer on your answer sheet.

To mark your answer, first make sure that the number on the answer sheet matches the number of the question that you are answering. Then, find the lettered space on your answer sheet that matches the letter of your answer choice. Completely blacken the space with your pencil. Make sure that there are no pencil marks in any area except the answer space that you are choosing.

Time limit

You will have two and one-half (2 1/2) hours to complete this test. You should have enough time to attempt to answer all of the questions.

General instructions

The test administrator will announce when you are to start working. At the end of 2 1/2 hours, the test administrator will tell you that time is up. You must stop working and wait for instructions for turning in your test. This booklet and all test materials must be returned to the test administrator. Any person who does not follow instructions, talks during the examination, or copies the work of another will be disqualified.

Do not turn this page until you are told to do so.