

Deductive and Inductive Reasoning Workbook

Employment Exam Preparation
For County of Los Angeles
Employment Exams



EMPLOY
CALIFORNIA
a 501(c)(3) nonprofit organization

**"I stand in awe of anyone
who hatches a dream and
who shows the guts
to hang tough, all alone,
and see it through to reality."**

Steven Pressfield, *Do the Work*

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Inductive Reasoning Word Problems

A Note from the Authors

We warmly welcome you to our Deductive and Inductive Reasoning Virtual Workshop, Workbook and Online Resource.

We created these resources so that we could assist you in your journey to prepare for your exam. By studying these resources, you will be better equipped to take on your upcoming employment exam.

Creating this nonprofit and the workshops was a labor of love that took a lot of time, effort, sweat, love and the founder's personal savings. **We humbly ask that you do not copy or share any of our material.** If you know someone who would benefit from our workshop but cannot afford it, please let us know by emailing us at jen@employcalifornia.org. We will take care of them--no problem at all.

If you enjoy these resources, please let others know by leaving a Google/Facebook review, or let your Union representative know they should offer our resources. Your positive feedback will help lead to funding, which will allow us to offer more career-building resources to you.

Thank you and we look forward to hearing about your future success,

The Employ California Team

Deductive and Inductive Reasoning Workbook

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- Employ California does not guarantee employment in any job or job posting, passage of any exam or any other such outcome.
- The live workshop, accompanying workbook and online resource are strictly to supplement the job seeker's own personal preparation.

The Workshop, Workbook, and Online Resource

This workbook accompanies the instruction within Employ California's *Deductive and Inductive Reasoning Workshop* and the accompanying Online Resource.

How the Workbook is Organized

Each section contains material the instructors will teach during the workshop. Answers to these sections will be given by the instructors during the workshop. There are also timed in-class quizzes to practice the strategies you learn during the workshop to simulate the exam.

Preparation Before the Workshop

- We highly recommend that you print this workbook so you can write directly on the workbook and take notes.
- It is **highly recommended** that you complete the questions before attending the workshop for best results. During the workshop, instructors will address how to solve each problem in each content section. By completing the questions beforehand, you can compare your method and answers with that of the instructors' method and answers as they are teaching. You can also check your answers and determine if there are more effective alternative approaches to solving the problems. There will be ample time for Q&A.

The Online Resource

After the workshop, you will be emailed an invitation to join our Online Resource for 4 weeks. We will also email you How To Create an Account instructions. If you have any questions during this process, you can call us directly.

If you wish to keep access to the Online Resource, a monthly subscription option is available that you can cancel at any time.

Was this workshop helpful?

Tell others who are also preparing for their exams by leaving us a review.

Scan here to leave a review we can share.



For more tips, strategies, practice questions, career tips and workshop announcements, follow us.



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Got a suggestion for us? We'd love to chat with you.



Call Jen at (213) 632-9388



jen@employcalifornia.org

Deductive Reasoning

Scheduling

Question 1

Directions: Determine when an all-staff meeting can be held on a weekday everyone is in the office.

- Diego works Tuesday - Friday and is off on Mondays.
- Phuong works Monday - Thursday and is off on Fridays.
- Randy returns from paternity leave on the 9th.
- Armen is on vacation from the 19th to the 27th.
- Kat works remotely Mondays, Tuesdays and Wednesdays.
- Marcus is on vacation from the 5th to the 11th.



Sun	Mon	Tue	Wed	Thu	Fri	Sat
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Question 2

Directions: Schedule the six meetings below. Dark gray boxes indicate times that are not available. The Director is only available in the AM this week.

Research must be completed before Wednesday.

Team-building Lunch must occur in the PM before the Presentation Review.

Check-in with Director must be at the beginning of the week.

All-team Meeting must be on Thursday.

Presentation Review must occur in the PM before Presentation to the Director.

Presentation to Director can only occur in the AM.

	SUN	MON	TUE	WED	THU	FRI	SAT
A M							
P M							

In-class Quiz A



Sun	Mon	Tue	Wed	Thu	Fri	Sat
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In-class Quiz B



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Percentages, Ratios & Graphs

Question 3

Directions: Answer the questions that follow.

An agency surveyed a group of patients because they did not review a required video prior to their scheduled appointment. The survey results are as follows.

Technology Issues	?
Video Not Provided	13
Time Constraints	39
Other	26

- The ratio of patients who did not receive the video to those with technology issues is 1:9. How many patients had technology issues?
- What is the ratio of Other to Video Not Provided?
- What percentage of patients reported time constraints?
- What is the ratio of Video Not Provided to the total?
- What is the ratio of those with time constraints to those with technology issues?

Question 4

Directions: *Determine the answer.*

DPSS has approximately 13,500 employees. Every employee has a computer and a monitor. Each year, 20% of the inventory is replaced, not including equipment needed for a projected 5% increase of staff.

How many pieces of equipment in total are added annually for all employees?

Deductive Reasoning Word Problems

Question 5

Employees at the Department of Children and Family Services complete 150,000 face-to-face assessments yearly. One team of six must complete 1,100 face-to-face visits monthly to meet their quotas.

Directions: First, determine the number of completed visits for each employee at DCFS. Then, rank each team member according to their completed visits highest to lowest.

Ji-hoon completed 100 cases
Fatima completed 2x Ji-hoon's cases
Vanessa completed 30% of Ji-hoon's cases plus 50 more
Elena completed 25 more than Fatima
Katie completed a 5:2 ratio of Vanessa's cases
Wei completed the most by 70

<https://hr.lacounty.gov/children-and-family-services/>

highest

A vertical ranking scale consisting of a vertical line on the left and six horizontal lines extending to the right, intended for ranking the employees from highest to lowest.

lowest

Question 6

In the Fiscal Year-to-Date July 1, 2021 to May 31, 2022, Los Angeles County adoptions through the Love at First Sight Program totaled the amount below.

*Directions: First, determine the number of adoptions per city.
Then rank the animal care centers from most animals adopted to least.*

- Downey and Lancaster have the same amounts.
- Castaic is 28% of Downey’s total.
- Lancaster is 500 less than Baldwin Park.
- Palmdale is 4.5 times more than Agoura.
- Castaic adopted 300 more than Agoura.
- Agoura adopted 400 pets.
- Baldwin Park = ?

most

least

*adoption totals are approximate

<https://animalcare.lacounty.gov/wp-content/uploads/2022/06/Pawstatus-May-2022.pdf>

Question 7

The Civic Action pilot...will award \$10,000 grants to up to 6,500 community-service-driven students through the new Californians for All College Corps fellowship to support Dreamers and students from low-income backgrounds...who want to do meaningful volunteer work but face obstacles because they often must hold multiple jobs to support themselves or family. Selected students will be expected to perform a total of 450 community service hours throughout the academic year.”

<https://www.latimes.com/california/story/2022-01-19/california-to-pay-low-income-students-for-community-service>

Directions: *Directions: Rank the participants according to spring semester hours worked.*

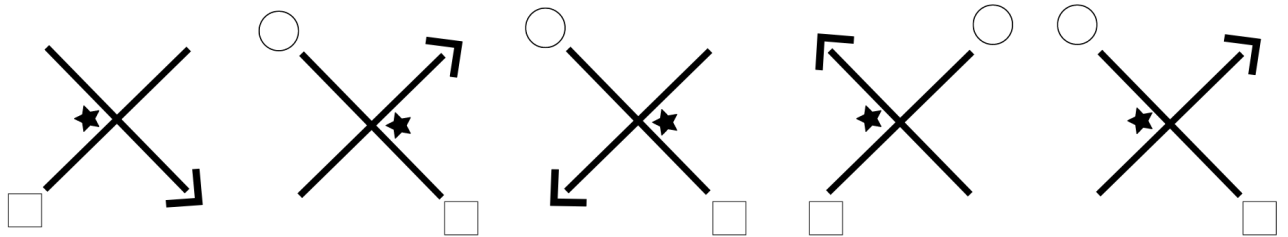
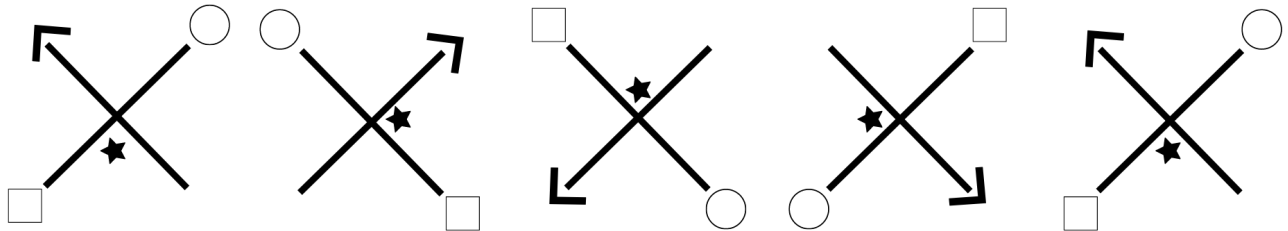
Shane	studying abroad and worked the least
Stephanie	is below Thu & Shinkai but above José
Kristen	worked 2 days more than Shane
José	has another job and worked the least, except for Shane and Kristen
Thu	worked the most
Shinkai	worked more than everyone but Thu

Inductive Reasoning

Patterns

Question 8

Directions: Determine which pattern comes next in the sequence.



A

B

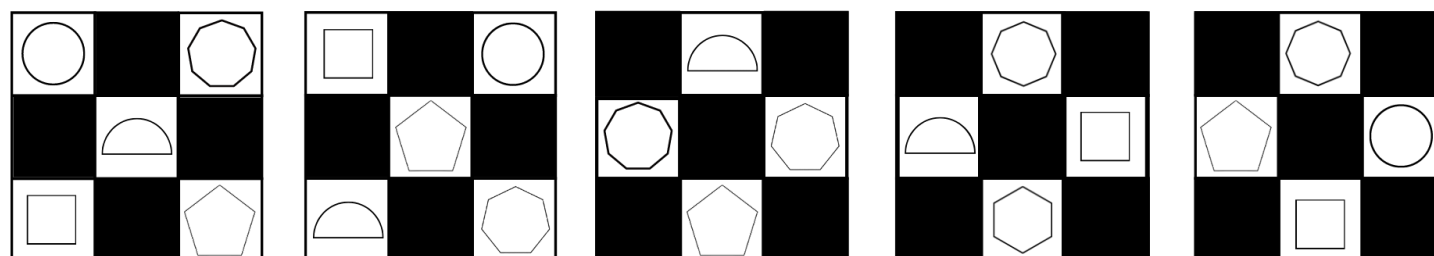
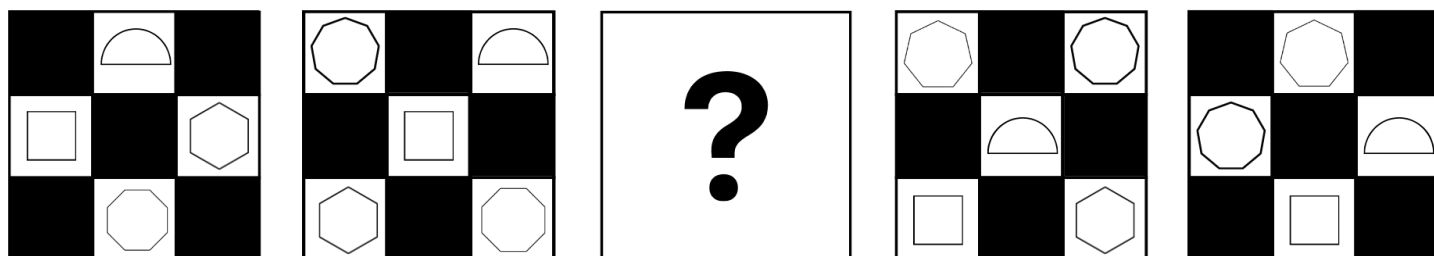
C

D

E

Question 9

Directions: Determine which pattern is missing in the sequence.



A

B

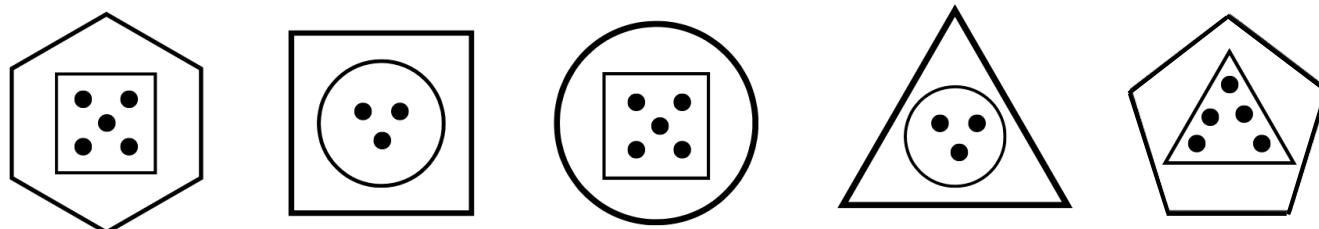
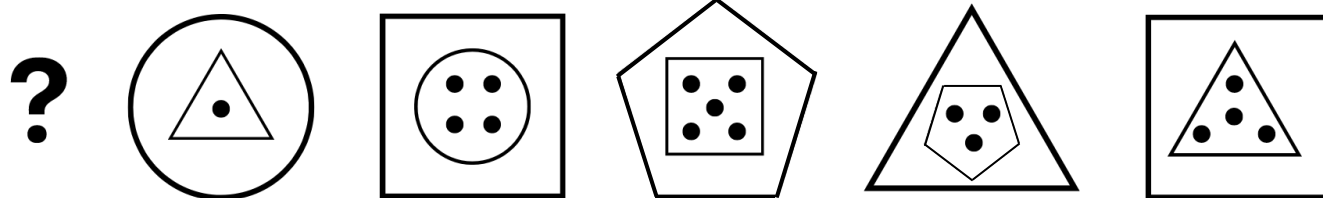
C

D

E

Question 10

Directions: Determine which pattern comes first in the sequence.



A

B

C

D

E

Inductive Reasoning Word Problems

Question 11

Directions: Review the information below.

- Ronald and Jaime are union members.
- Jaime is a member of SEIU 721.
- SEIU 721 members approved a ULP strike with 98% approval.
- Most union employees in the County of Los Angeles are members of SEIU 721.
- SEIU 721 requires monthly dues.

Based on the information above, which must be true?

- A. Ronald pays monthly dues.
- B. Jaime pays monthly dues.
- C. Jaime approved the ULP strike.
- D. Ronald is a member of SEIU 721.

Question 12

Directions: Review the yearly toy donation drop-offs completed in five area locations.

Donation Stops	Truck Type	Available Days
San Fernando Valley	box truck	Monday, Tuesday, Wednesday
South L.A.	18-wheeler	Monday - Friday
Lancaster	box truck and 18-wheeler	Monday - Thursday
East L.A.	box truck	weekends
San Gabriel Valley	18-wheeler	7 days a week

Based on this information and the restrictions below, who is best suited to pick up the Lancaster load?

- Bill can only drive in San Fernando Valley and East L.A.
- Ron only drives 18-wheelers.
- Joe only drives 18-wheelers and only works weekends.
- Sam only drives box trucks and only works weekends.
- Tony drives both trucks, but only works Tuesday - Thursday.

- A. Tony
- B. Joe
- C. Ron
- D. Sam
- E. Bill

Question 13

Directions: Review the information below.

Your association is interviewing 6 candidates for a new Board President. You can only interview one person in the morning and one in the afternoon, but you aren't available to interview in the afternoon on Mondays, Wednesdays, or Fridays.

Tim is not available on the first three days of the week.

Jan must have her interview before Nick but after Brian.

Sandra is only available Tuesdays and Fridays in the AM.

Ashley requested to be one of the first few interviewed.

Brian is before both Tim and Ashley.

Considering the restrictions above, what cannot be true?

- A. Nick's interview is on Friday.
- B. Brian's interview is on Thursday.
- C. Sandra's interview is on Tuesday
- D. Jan's interview is on Wednesday.
- E. Ashley's interview is after Sandra's.

Practice Graphs



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Practice Graphs

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P M							

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