EXERCISES IN MS ACCESS WITH ANSWERS File PDF

Exercises in MS Access with Answers

Microsoft Access is a powerful database management system that allows users to create, manage, and analyze data efficiently. Whether you are a beginner or an advanced user, practicing exercises in MS Access can significantly improve your understanding of database concepts and enhance your skills in designing, querying, and managing data. This article provides a comprehensive set of exercises in MS Access with answers, designed to help you master various aspects of the software, from creating tables to writing complex queries.

Understanding the Basics of MS Access

Before diving into exercises, it?s essential to understand the core components of MS Access:

- Tables: Store data in rows and columns.
- Queries: Retrieve specific data based on certain criteria.
- Forms: User-friendly interfaces for data entry and modification.
- Reports: Present data in formatted layouts for printing or analysis.
- Macros and Modules: Automate tasks and add custom functionality.

Basic Exercises in MS Access

These exercises focus on fundamental tasks that build a solid foundation in MS Access.

Exercise 1: Creating a New Database

Task: Create a new database named "LibraryManagement.accdb".

Answer:

- Open MS Access.
- Click on "Blank database."
- Enter "LibraryManagement" in the File Name box.
- Click "Create."

- Save the database in your preferred location.

Exercise 2: Creating and Designing a Table

Task: Create a table named "Books" with the following fields:

- BookID (AutoNumber, Primary Key)
- Title (Short Text)
- Author (Short Text)
- Genre (Short Text)
- YearPublished (Number)

Answer:

- In the Navigation Pane, right-click "Tables" and select "Design View."
- When prompted, save the table as "Books."
- Add the fields as specified:

- BookID: Data Type = AutoNumber
- Title: Data Type = Short Text
- Author: Data Type = Short Text
- Genre: Data Type = Short Text
- YearPublished: Data Type = Number

- Set BookID as the primary key by right-clicking the row and selecting "Primary Key."
- Save the table.

Exercise 3: Entering Data into the Table

Task: Enter sample data into the "Books" table.

Answer:

- Open the "Books" table in Datasheet View.
- Enter data such as:

- BookID: (Auto-filled)
- Title: "The Great Gatsby"
- Author: "F. Scott Fitzgerald"
- Genre: "Fiction"
- YearPublished: 1925

- Continue entering at least 5 records to practice data entry.

Intermediate Exercises in MS Access

These exercises involve more complex tasks like querying data, creating relationships, and designing forms.

Exercise 4: Creating a Simple Select Query

Task: Retrieve all books published after 2000.

Answer:

- Click on "Create" tab and select "Query Design."
- Add the "Books" table.
- Drag all fields to the grid.
- In the "YearPublished" column, set the criteria to ">2000".
- Run the query by clicking "Run."
- The result will display books published after 2000.

Exercise 5: Using a Parameter Query

Task: Prompt the user to enter a genre and display books of that genre.

Answer:

- Create a new query in Design View.
- Add the "Books" table.
- Drag all relevant fields.
- In the "Genre" criteria row, type `[Enter Genre:]`.
- Save and run the query.
- When prompted, enter a genre (e.g., "Fiction"), and the query will display matching books.

Exercise 6: Creating Relationships Between Tables

Task: Create two tables, "Authors" and "Books," and establish a relationship.

Answer:

- Create "Authors" table with fields:

- AuthorID (AutoNumber, Primary Key)
- AuthorName (Short Text)

- Modify "Books" table:

- Remove the "Author" field.
- Add "AuthorID" (Number).

- Save both tables.
- Open "Database Tools" tab and click "Relationships."
- Add both tables to the window.
- Drag "AuthorID" from "Authors" to "AuthorID" in "Books" to create a relationship.
- Enforce referential integrity.
- Save relationships.

Advanced Exercises in MS Access

These exercises are intended for users who want to explore more sophisticated features like forms, reports, and SQL.

Exercise 7: Creating a Form for Data Entry

Task: Design a form for entering data into the "Books" table.

Answer:

- Select the "Books" table.

- Click "Create" > "Form."
- Access will generate a default form.
- Use the "Design" view to customize layout and controls.
- Save the form as "BooksEntryForm."
- Open the form to test data entry.

Exercise 8: Generating a Report

Task: Create a report that lists all books by a specific author.

Answer:

- Create a query that selects books where "Author" equals a parameter `[Enter Author Name:]`.
- Save the query as "BooksByAuthor."
- Select the query.
- Click "Create" > "Report."
- Customize the report layout as needed.
- Save the report as "BooksByAuthorReport."
- Run the report and enter an author?s name to view the list.

Exercise 9: Writing SQL Queries

Task: Write an SQL statement to find the total number of books in each genre.

Answer:

```sql
SELECT Genre, COUNT() AS TotalBooks
FROM Books
GROUP BY Genre;
```

- Open the "Create" tab and select "Query Design."
- Switch to SQL View.
- Paste the above SQL statement.

- Run the query to see the count of books per genre.

Tips for Effective Practice in MS Access

- Always back up your database before making significant changes.
- Use descriptive names for tables, fields, queries, and reports.
- Practice creating relationships to understand data normalization.
- Explore built-in templates for learning best practices.
- Use SQL view for advanced query customization.
- Test queries with different criteria to understand filtering and sorting.

Conclusion

Practicing exercises in MS Access with answers is an effective way to deepen your understanding of database management. From creating tables and entering data to designing forms, reports, and writing SQL queries, each exercise builds your skills incrementally. By consistently practicing these exercises, you'll become proficient in MS Access, enabling you to design robust databases that meet various business and personal needs. Remember, hands-on experience is key?so keep experimenting and exploring the many features MS Access offers.

Exercises in MS Access with Answers: A Comprehensive Guide for Beginners and Intermediate Users

Microsoft Access remains one of the most popular database management systems, especially among small to medium-sized businesses and individual developers. Its user-friendly interface, combined with powerful features, makes it an ideal platform for creating, managing, and analyzing data. For learners and practitioners aiming to master MS Access, practicing through exercises is an effective way to solidify understanding and develop practical skills. This article provides a comprehensive, detailed exploration of exercises in MS Access, complete with answers, explanations, and analytical insights to foster a deeper grasp of the platform?s functionalities.

Understanding the Importance of MS Access Exercises

Before diving into specific exercises, it's crucial to recognize why practicing with exercises enhances learning in MS Access. Exercises serve as a bridge between theoretical knowledge and real-world application. They help users:

- Reinforce understanding of core concepts such as tables, queries, forms, and reports.
- Develop problem-solving skills tailored to database design challenges.

- Discover best practices for data normalization and integrity.
- Gain confidence in creating and managing databases efficiently.

By systematically working through exercises, learners can identify gaps in their knowledge and build a solid foundation for more advanced topics, such as VBA scripting or complex database architecture.

Structured Approach to MS Access Exercises

Effective exercises are well-structured, progressive, and aligned with learning objectives. They typically follow a sequence that mirrors real-world database development stages:

- Design and Planning
- Creating Tables and Relationships
- Data Entry and Validation
- Query Creation
- Form Design
- Report Generation
- Advanced Features (VBA, macros)

Below, we'll explore each stage with detailed exercises, accompanied by answers and explanations to guide learners through the process.

Section 1: Designing a Database - Planning and Requirements Gathering

Exercise 1:

Scenario: You are tasked with designing a database for a small library. The database should store information about books, authors, members, and borrowings.

Question:

Identify the key entities and their attributes. Create an Entity-Relationship (ER) diagram outline.

Answer & Explanation:

Entities and Attributes:

- Books: BookID (PK), Title, Genre, PublicationYear, AuthorID (FK)
- Authors: AuthorID (PK), FirstName, LastName, BirthDate
- Members: MemberID (PK), FirstName, LastName, Address, PhoneNumber, MembershipDate
- Borrowings: BorrowingID (PK), BookID (FK), MemberID (FK), BorrowDate, ReturnDate

ER Diagram Outline:

- One-to-many relationship between Authors and Books (one author can write many books).
- Many-to-many relationship between Books and Members through the Borrowings table (a book can be borrowed multiple times by different members, and a member can borrow many books).
- The Borrowings table acts as a junction table linking Books and Members.

Key Takeaway:

This exercise emphasizes understanding entities, attributes, primary keys (PK), and foreign keys (FK), which are foundational for creating logical database structures.

Section 2: Creating Tables and Establishing Relationships

Exercise 2:

Instruction: Using MS Access, create the tables for the library database based on the previous exercise. Define appropriate data types and set primary keys. Then, establish relationships between tables.

Answer & Explanation:

Steps:

- Open MS Access and create a new blank database named "LibraryDB."
- Create the Authors table with fields:

- AuthorID: AutoNumber (Primary Key)
- FirstName: Short Text
- LastName: Short Text
- BirthDate: Date/Time

- Create the Books table with fields:

- BookID: AutoNumber (PK)
- Title: Short Text
- Genre: Short Text
- PublicationYear: Number
- AuthorID: Number (Foreign Key)

- Create the Members table:

- MemberID: AutoNumber (PK)
- FirstName: Short Text
- LastName: Short Text
- Address: Short Text
- PhoneNumber: Short Text
- MembershipDate: Date/Time

- Create the Borrowings table:

- BorrowingID: AutoNumber (PK)
- BookID: Number (FK)
- MemberID: Number (FK)
- BorrowDate: Date/Time
- ReturnDate: Date/Time

Establish Relationships:

- Go to Database Tools > Relationships.
- Drag and connect AuthorID in Authors to AuthorID in Books (one-to-many).
- Drag and connect BookID in Books to BookID in Borrowings (one-to-many).
- Drag and connect MemberID in Members to MemberID in Borrowings (one-to-many).

Key Takeaway:

Proper table creation with appropriate data types and relationships ensures data integrity and

efficient database operations.

Section 3: Data Entry and Validation

Exercise 3:

Scenario: You need to add sample data to the tables and ensure data validation rules are in place to prevent errors.

Question:

Describe how to input data into the 'Authors' table and set validation rules for the 'BirthDate' field to prevent future dates.

Answer & Explanation:

Data Entry:

- Open the 'Authors' table in Datasheet View.
- Enter sample data, e.g.,
- FirstName: "Jane"
- LastName: "Austen"
- BirthDate: "1775-12-16"

Setting Validation Rules:

- Switch to Design View.
- Select the 'BirthDate' field.
- In the Field Properties pane, set the 'Validation Rule' to:

`

- Set the 'Validation Text' to:

`"BirthDate cannot be in the future."`

Testing:

- Try entering a future date; Access will prompt an error, enforcing data correctness.

Key Takeaway:

Validation rules are essential for maintaining data accuracy and preventing logical errors in the database.

Section 4: Creating Queries for Data Retrieval

Exercise 4:

Scenario: Generate a list of all books borrowed by a specific member, say, MemberID = 3.

Question:

Construct an SQL query to fetch the book titles borrowed by this member.

Answer & Explanation:

SQL Query:

```sql
SELECT Books.Title
FROM Books
INNER JOIN Borrowings ON Books.BookID = Borrowings.BookID
WHERE Borrowings.MemberID = 3;
```

Explanation:

- The query joins the 'Books' and 'Borrowings' tables on 'BookID'.
- It filters records where 'MemberID' equals 3.
- The result displays the titles of all books borrowed by that member.

Alternative Using Query Design:

- Use Query Design view, add 'Books' and 'Borrowings'.
- Join the tables on 'BookID'.
- Add criteria: 'Borrowings.MemberID' = 3.
- Select 'Books.Title' to display.

Key Takeaway:

Understanding joins and filters in queries enables precise data retrieval critical for reports and analysis.

Section 5: Designing Forms for User Interaction

Exercise 5:

Scenario: Create a form to allow easy data entry of new books, linked to the authors table via a dropdown.

Question:

Describe the steps to design this form in MS Access.

Answer & Explanation:

Steps:

- Go to Create > Form Wizard.
- Select the 'Books' table as the source.
- Choose fields: BookID (hidden), Title, Genre, PublicationYear, AuthorID.
- When prompted for related tables, select 'Authors' for the 'AuthorID' field.
- Choose 'Combo Box' for the 'AuthorID' field to select authors from a dropdown list.
- Complete the wizard and switch to Form View.
- Adjust layout for clarity.

Enhancements:

- Set the combo box to display 'FirstName' and 'LastName' but store 'AuthorID'.
- Add validation to ensure no duplicate BookID.

Key Takeaway:

Designing intuitive forms streamlines data entry and reduces errors, especially when linked with lookup fields.

Section 6: Generating Reports for Data Analysis

Exercise 6:

Scenario: Create a report that shows all overdue books, i.e., books that have not been returned past their due date (assume due date is 14 days after BorrowDate).

Question:

Outline the process and provide the SQL query for this report.

Answer & Explanation:

Process:

- Create a new query based on the 'Borrowings' table.
- Include fields: BorrowingID, BookID, MemberID, BorrowDate, ReturnDate.
- Add a calculated field for DueDate: `DueDate: DateAdd("d", 14, [BorrowDate])`.
- Set criteria:

- `ReturnDate` is null or `ReturnDate` > `DueDate`.
- Or, if 'ReturnDate'

QuestionAnswer What are the basic exercises to improve skills in MS Access? Basic exercises include creating tables, designing forms, writing simple queries, and building reports to understand data management in MS Access. How can I practice creating relationships between tables in MS Access? Practice by creating multiple tables (e.g., Customers and Orders) and establishing relationships using the Relationships tool to enforce data integrity and understand referential links. What is an effective way to learn writing SQL queries in MS Access? Start with simple SELECT statements, then progress to JOINs, WHERE clauses, and aggregate functions. Use the Query Design view for visual query building and gradually write SQL code directly. How do I practice designing user-friendly forms in MS Access? Create forms based on your tables or queries, customize layouts, add controls like buttons and combo boxes, and test data entry to improve usability and interface design skills. What exercises can help me understand data validation in MS Access? Practice setting validation rules and input masks on table fields, creating validation messages, and testing data entry to ensure data quality and consistency. How can I learn to

generate reports in MS Access? Create reports from tables and queries, experiment with grouping, sorting, and formatting options, and practice designing printable reports for data presentation. What are some advanced exercises to master macros and VBA in MS Access? Practice automating tasks by creating macros, then extend your skills by writing VBA code to handle complex operations, event handling, and custom functions within Access databases. How do I troubleshoot common errors when practicing MS Access exercises? Learn to read error messages carefully, use the Expression Builder and Debug features, and consult online resources or forums to resolve issues related to queries, relationships, or code.

Related keywords: MS Access exercises, Access database practice, Access tutorial questions, MS Access quiz, Access VBA exercises, Access forms practice, MS Access case studies, Access query exercises, Access table design tasks, MS Access problem sets

Scipad Biology Answers

scipad biology answers are essential tools for students and educators seeking to excel in biology coursework and assessments. Scipad, a popular digital learning platform, offers a variety of resources, including practice questions, quizzes, and detailed answer explanations that aid in mastering complex biological concepts. This article provides a comprehensive overview of scipad biology answers, their importance, how to utilize them effectively, and tips for maximizing learning outcomes.

Understanding Scipad Biology Answers

What Are Scipad Biology Answers?

Scipad biology answers are the solutions and explanations provided for questions found within the Scipad platform?s biology modules. These answers are carefully curated by educators and subject matter experts to ensure accuracy and clarity. They serve as a valuable reference for students to verify their responses, understand the reasoning behind correct answers, and reinforce their learning.

The Role of Scipad Biology Answers in Learning

Using scipad biology answers enhances the learning experience by:

- Providing immediate feedback on practice questions

- Clarifying complex biological processes and terminology
- Helping students identify areas that need improvement
- Facilitating self-paced learning outside the classroom
- Preparing effectively for exams and quizzes

Benefits of Using Scipad Biology Answers

1. Accurate and Reliable Content

One of the primary advantages of scipad biology answers is their accuracy. Developed by qualified educators, these answers are aligned with current biology curricula and standards, ensuring students receive trustworthy information.

2. Enhanced Understanding of Concepts

Detailed explanations accompanying answers help students grasp underlying biological principles, promoting deeper understanding beyond rote memorization.

3. Time-Efficient Study Sessions

Quick access to correct answers allows students to assess their performance swiftly, enabling more efficient review sessions.

4. Support for Different Learning Styles

Whether visual, auditory, or kinesthetic learners, students can benefit from diverse explanations and interactive content available through scipad.

How to Effectively Use Scipad Biology Answers

1. Attempt Questions First

Before consulting the answers, attempt to solve questions independently. This practice encourages critical thinking and problem-solving skills.

2. Review Correct Answers Carefully

After completing questions, compare your responses with the provided answers. Pay attention to explanations to understand why certain options are correct or incorrect.

3. Focus on Explanation Details

Go beyond the correct answer and study the detailed breakdowns. This will deepen your comprehension of biological concepts and processes.

4. Use Answers as Learning Tools

Instead of passively copying answers, use them as learning tools to explore related topics, clarify doubts, and reinforce your knowledge.

5. Incorporate Practice Tests

Regularly use scipad biology practice tests with answers to simulate exam conditions and build confidence.

Tips for Maximizing the Benefits of Scipad Biology Answers

1. Create a Study Schedule

Consistency is key. Dedicate specific times for practicing with scipad resources, ensuring steady progress.

2. Take Notes While Reviewing Answers

Summarize explanations in your own words, which aids retention and understanding.

3. Engage with Interactive Features

Leverage interactive diagrams, videos, and quizzes available on scipad to diversify your learning methods.

4. Clarify Doubts Promptly

If certain answers or explanations are unclear, seek help from teachers or online forums to ensure comprehension.

5. Track Your Progress

Maintain a record of questions answered and concepts mastered to identify strengths and areas needing improvement.

Common Topics Covered by Scipad Biology Answers

Scipad biology answers span a wide range of topics, reflecting the diverse curriculum of biology courses. Some of the most common areas include:

- Cell Structure and Function
- Genetics and Heredity
- Evolution and Natural Selection
- Human Anatomy and Physiology
- Plant Biology and Photosynthesis
- Microorganisms and Diseases
- Ecology and Environment
- Biological Processes and Cycles

Each topic has associated practice questions with detailed answers, enabling comprehensive review and mastery.

Challenges and Considerations When Using Scipad Answers

1. Dependence on Answers

While answers are valuable, over-reliance can hinder the development of problem-solving skills. It?s important to attempt questions independently first.

2. Ensuring Up-to-Date Content

Biology is an evolving science. Ensure that the scipad content is current and aligns with the latest curriculum standards.

3. Verifying Correctness

Occasionally, errors might occur. Cross-reference answers with textbooks or trusted online resources for confirmation.

Conclusion

In summary, scipad biology answers are a powerful resource for students aiming to excel in biology. They provide accurate, detailed explanations that foster understanding, support effective revision, and boost exam readiness. By integrating scipad answers into a structured study plan, students can enhance their grasp of biological concepts, develop critical thinking skills, and achieve academic success. Remember to use these answers as a supplement to active learning strategies, ensuring a well-rounded and effective approach to mastering biology.

Scipad Biology Answers: A Comprehensive Guide to Mastering Scipad?s Resources

In the realm of biology education, students constantly seek effective tools to enhance their understanding and retention of complex concepts. Among these tools, Scipad Biology Answers stand out as a vital resource for learners aiming to excel in their studies. Whether you're preparing for exams, revising key topics, or seeking clarification on challenging concepts, accessing accurate and detailed answers from Scipad can make a significant difference. This guide aims to explore the importance of Scipad Biology answers, how to utilize them effectively, and tips for maximizing their benefits to foster a deeper comprehension of biological sciences.

Understanding Scipad and Its Role in Biology Education

What is Scipad?

Scipad is an educational platform designed to offer comprehensive resources for students across various subjects, with a strong focus on biology. It provides a wide range of study materials, including notes, quizzes, and most notably, detailed answers to textbook exercises and questions. These answers are curated to align with curriculum standards, making them reliable tools for learning and revision.

Why Are Scipad Biology Answers Important?

- Clarify Difficult Concepts: They help break down complex biological processes into understandable explanations.
- Aid in Exam Preparation: Well-structured answers serve as excellent revision tools for exams.
- Ensure Accuracy: Reliable answers minimize misunderstandings that could arise from incorrect or incomplete information.
- Enhance Critical Thinking: Comparing your answers with Scipad?s encourages analytical thinking and self-assessment.

How to Effectively Use Scipad Biology Answers

Maximizing the benefits of Scipad answers involves more than just reading. It's about strategic engagement to deepen understanding and develop exam skills.

Step 1: Use Answers as a Learning Tool, Not Just a Shortcut

While it might be tempting to copy answers directly, the true value lies in understanding the reasoning behind each response.

- Read Carefully: Analyze the explanations provided.
- Identify Key Points: Highlight essential concepts, definitions, and processes.
- Compare Your Work: Assess where your answers align or differ, and understand why.

Step 2: Practice Active Learning

- Attempt Questions First: Before consulting the answers, try solving questions independently.
- Use Answers to Check and Correct: After attempting, compare with Scipad?s solutions to identify gaps in knowledge.
- Rewrite or Summarize: Paraphrase answers to reinforce comprehension.

Step 3: Incorporate into Study Routines

- Regular Revision: Use answers to review topics periodically.
- Focused Study Sessions: Target areas where your answers and Scipad?s diverge.
- Create Summaries: Develop concise notes based on detailed answers to aid quick revision.

Navigating Common Challenges with Scipad Biology Answers

While Scipad offers valuable resources, users may encounter some challenges. Here are common issues and strategies to overcome them:

Challenge 1: Over-Reliance on Answers

Solution: Use answers as a guide rather than a crutch. Always aim to understand the why behind each response.

Challenge 2: Outdated or Incomplete Answers

Solution: Cross-reference answers with textbooks, class notes, or reputable online resources to ensure accuracy and completeness.

Challenge 3: Difficulty in Understanding Explanations

Solution: Break down complex explanations into simpler parts, and seek additional resources or videos for clarification.

Best Practices for Using Scipad Biology Answers Effectively

To truly benefit from Scipad, students should adopt best practices, including:

- Active Engagement: Don?t passively read answers; interact with them.
- Contextual Learning: Relate answers to real-life examples or practical applications for better retention.
- Question Development: Use answers to generate your own questions for further exploration.
- Group Study: Discuss answers with peers to gain different perspectives and deepen understanding.

Enhancing Learning with Supplementary Resources

While Scipad answers are valuable, supplement your study with other resources:

- Biology Textbooks: For detailed explanations and diagrams.
- Online Tutorials and Videos: Platforms like Khan Academy or YouTube channels specializing in biology.
- Practice Tests: To simulate exam conditions and test your knowledge.
- Flashcards: For memorizing definitions, processes, and terminology.

Ethical Use and Academic Integrity

While leveraging Scipad biology answers can be highly beneficial, it's crucial to uphold academic integrity:

- Avoid Plagiarism: Use answers for learning, not for submitting as your own work.
- Develop Your Own Responses: Use answered questions to guide your understanding and craft original responses.
- Cite Resources: When referencing information from Scipad, give appropriate acknowledgment if required.

Final Thoughts: Mastering Biology with Scipad Answers

Scipad Biology Answers are an invaluable resource for students striving to excel in their biological sciences coursework. They serve as guides, clarifiers, and confidence boosters when used correctly. Remember, the goal is not just to memorize answers but to develop a genuine understanding of biology?s fundamental principles. By integrating Scipad answers into a strategic study plan?complemented with other resources, active learning techniques, and ethical practices?you can unlock your full potential and achieve academic success in biology. Embrace

these answers as stepping stones towards mastery, and let them inspire curiosity and a lifelong passion for understanding the living world.

QuestionAnswer What is Scipad Biology and how can it help students? Scipad Biology is an educational resource that provides concise summaries and answers to biology topics, helping students prepare for exams and understand complex concepts more easily. Where can I find accurate Scipad Biology answers for my coursework? You can find accurate Scipad Biology answers on official educational websites, authorized study guides, or through reputable online platforms that offer verified solutions and explanations. How do I effectively use Scipad Biology answers for exam preparation? Use Scipad Biology answers as a supplement to your study materials by reviewing concepts, practicing questions, and ensuring you understand the explanations to reinforce your learning. Are Scipad Biology answers suitable for all grade levels? Yes, Scipad Biology offers content tailored for various grade levels, from secondary education to college, making it a versatile resource for different learners. Can I rely solely on Scipad Biology answers for my exams? While Scipad Biology answers are helpful, it?s best to use them alongside textbooks, class notes, and practical exercises to achieve a comprehensive understanding of the subject. What are the common topics covered in Scipad Biology answers? Common topics include cell biology, genetics, ecology, human anatomy, plant biology, and evolution, among others, all explained in a simplified and accessible manner.

Related keywords: scipad biology solutions, scipad biology answers key, scipad biology homework help, scipad biology quiz answers, scipad biology practice questions, scipad biology review, scipad biology module answers, scipad biology guide, scipad biology assessments, scipad biology worksheets

Read the full article online: SCIPAD BIOLOGY ANSWERS