

# Facing Math Lesson 17

**FACING MATH™** Name: 3-13-12

## Lesson 17: Solving Compound Inequalities

**Directions:** Solve each compound inequality and use a pencil to **DRAW** the object that corresponds with your answer. **SHOW YOUR STEPS!!!**

<p>1. <math>4 \leq x + 2 \leq 7</math></p> <p>(a) If your answer is <math>2 \leq x \leq 5</math> draw the following ears.</p> <p>(b) If your answer is <math>6 \leq x \leq 9</math> draw the following ears.</p>	<p>2. <math>x + 6 &gt; 4</math></p> <p>(a) If your answer is <math>x &gt; 10</math> draw the following snorkel mask.</p> <p>(b) If your answer is <math>x &gt; 2</math> draw the following snorkel mask.</p>	<p>3. <math>x + 6 \leq 10</math> or <math>x - 2 \geq 3</math></p> <p>(a) If your answer is <math>x \leq 5</math> or <math>x \geq 4</math> draw the following eyes inside the mask.</p> <p>(b) If your answer is <math>x \leq 4</math> or <math>x \geq 5</math> draw the following eyes inside the mask.</p>
<p>4. <math>-3 \geq -3x \geq -9</math></p> <p>(a) If your answer is <math>-6 \leq x \leq 0</math> draw the following eyebrows.</p> <p>(b) If your answer is <math>1 \leq x \leq 3</math> draw the following eyebrows.</p>	<p>5. <math>5x \leq -15</math> or <math>2x \geq 6</math></p> <p>(a) If your answer is <math>x \leq 3</math> or <math>x \geq -3</math> draw the following snorkel.</p> <p>(b) If your answer is <math>x \leq -3</math> or <math>x \geq 3</math> draw the following snorkel.</p>	<p>6. <math>-15 &lt; x - 7</math></p> <p>(a) If your answer is <math>-8 &lt; x</math> draw TWO bubbles coming out of the snorkel.</p> <p>(b) If your answer is <math>-8 &gt; x</math> draw LOTS of bubbles coming out of the snorkel.</p>
<p>7. <math> x + 6  = 5</math></p> <p>(a) If your answer is <math>x = -1, -11</math> draw the following hair.</p> <p>(b) If your answer is <math>x = 1</math> draw the following hair.</p>	<p>8. <math>5 &lt; x - 1 &lt; 7</math></p> <p>(a) If your answer is <math>6 &lt; x &lt; 8</math> draw seaweed in the background.</p> <p>(b) If your answer is <math>4 &lt; x &lt; 6</math> draw coral in the background.</p>	<p>9. <math>-2 &lt; 1 - x &lt; 5</math></p> <p>(a) If your answer is <math>-3 &lt; x &lt; 4</math> draw an octopus in the background.</p> <p>(b) If your answer is <math>-4 &lt; x &lt; 3</math> draw a jellyfish in the background.</p>
<p>10. <math>-2 \geq -2x - 4 \geq -6</math></p> <p>(a) If your answer is <math>-2 \leq x \leq 2</math> draw a seashell in the background.</p> <p>(b) If your answer is <math>-1 \leq x \leq 1</math> draw a starfish in the background.</p>	<p>11. <math>-9x &lt; 18</math> or <math>x + 5 &lt; -2</math></p> <p>(a) If your answer is <math>x &lt; -7</math> or <math>x &gt; -2</math> draw a school of fish in the background.</p> <p>(b) If your answer is <math>x &lt; -9</math> or <math>x &gt; -7</math> draw TWO fish in the background.</p>	<p>12. <math> 3x - 2  = 4</math></p> <p>(a) If your answer is <math>x = 2, -2</math> draw a whale in the background.</p> <p>(b) If your answer is <math>x = 2</math> draw a shark in the background.</p>

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Facing Math Lesson 17 is a pivotal segment in the Facing Math curriculum, designed to enhance students' understanding of mathematics through collaborative learning and problem-solving strategies. This lesson focuses on developing critical thinking skills, mathematical reasoning, and the ability to work effectively in teams. In this article, we will delve into the objectives, key concepts, activities, and assessment methods employed in Facing Math Lesson 17, providing educators and students with a comprehensive overview of what to expect.

## Objectives of Facing Math Lesson 17

The primary objectives of Facing Math Lesson 17 are as follows:

1. **Enhancing Problem-Solving Skills:** Students will engage in various mathematical problems that challenge their critical thinking abilities and require them to apply multiple strategies to find solutions.
2. **Collaboration and Communication:** The lesson emphasizes the importance of teamwork, where students work in pairs or small groups to discuss their thought processes and solutions.
3. **Conceptual Understanding:** Students will deepen their understanding of mathematical concepts by exploring them from different angles and discussing their findings with peers.
4. **Application of Mathematical Concepts:** The lesson encourages students to apply theoretical knowledge to real-world scenarios, thereby making math more relevant and engaging.

## **Key Concepts Covered in Lesson 17**

Lesson 17 introduces several key mathematical concepts essential for student development:

### **1. Algebraic Expressions**

- **Definition:** Students learn to identify and construct algebraic expressions, understanding the components such as variables, coefficients, and constants.
- **Operations:** The lesson covers how to perform operations with algebraic expressions, including addition, subtraction, multiplication, and division.
- **Simplification:** Students practice simplifying expressions, which is a crucial skill in algebra.

### **2. Equations and Inequalities**

- **Solving Equations:** The lesson provides strategies for solving linear equations, emphasizing step-by-step approaches to isolate the variable.
- **Inequalities:** Students learn to solve and graph inequalities, understanding the differences between equations and inequalities.

### **3. Functions and Graphing**

- **Function Basics:** The concept of functions is introduced, including domain, range, and the importance of function notation.
- **Graphing:** Students learn to plot points and graph linear functions, connecting algebraic expressions to graphical representations.

### **4. Real-World Applications**

- Problem Scenarios: The lesson incorporates real-world problems that require students to apply their mathematical knowledge to find solutions, such as budgeting, measuring, or calculating distances.

## **Activities in Facing Math Lesson 17**

The activities in Facing Math Lesson 17 are designed to be interactive and engaging, promoting a hands-on approach to learning.

### **1. Group Problem-Solving Sessions**

- Collaborative Learning: Students are divided into small groups and given complex problems that require collective brainstorming and discussion. This promotes peer-to-peer learning and helps students articulate their thought processes.
- Role Assignments: Each group member is assigned a specific role (e.g., recorder, presenter, checker) to ensure active participation and accountability.

### **2. Individual Practice Problems**

- Worksheets: After group activities, students receive worksheets with a variety of problems to solve independently, reinforcing the concepts learned during group work.
- Timed Challenges: To encourage quick thinking and application, some worksheets may include timed challenges that add an element of competition.

### **3. Technology Integration**

- Online Resources: The lesson encourages the use of online math tools and apps that allow students to visualize problems and interact with mathematical concepts in a digital format.
- Interactive Games: Math games that focus on algebraic expressions and equations are incorporated, making learning fun and engaging.

## **Assessment Methods**

Assessment in Facing Math Lesson 17 is multifaceted, allowing educators to gauge student understanding through various means.

### **1. Formative Assessments**

- Observational Assessments: Teachers observe group interactions and problem-solving processes to assess collaboration and communication skills.

- Exit Tickets: At the end of the lesson, students provide written feedback on what they learned and any questions they still have, helping teachers identify areas that may need further review.

## **2. Summative Assessments**

- Quizzes and Tests: At the conclusion of the unit, students may take quizzes or tests that cover all the concepts taught, ensuring they have a solid understanding of the material.
- Project-Based Assessments: Students can be assigned projects that require them to apply their knowledge to real-world scenarios, presenting their findings to the class.

## **3. Self-Assessment and Reflection**

- Reflection Journals: Students are encouraged to keep journals where they reflect on their learning experiences, challenges faced, and strategies they developed throughout the lesson.
- Peer Review: Students can participate in peer review sessions where they critique each other's work, providing constructive feedback and learning from one another.

## **Conclusion**

Facing Math Lesson 17 serves as a crucial building block in students' mathematical education, emphasizing the importance of collaboration, critical thinking, and real-world application of mathematical concepts. With a focus on algebraic expressions, equations, functions, and engaging activities, this lesson not only enhances students' understanding of mathematics but also fosters a love for learning. By incorporating various assessment methods, educators can ensure that students grasp the material effectively and are prepared for more advanced mathematical challenges in the future. As students navigate through the complexities of math, they develop essential skills that will serve them well beyond the classroom, preparing them for success in the ever-evolving world of mathematics and beyond.

## **Frequently Asked Questions**

### **What is the primary focus of Facing Math Lesson 17?**

Facing Math Lesson 17 focuses on solving equations and inequalities, emphasizing the importance of understanding variable relationships.

### **What types of problems can students expect in Lesson 17?**

Students can expect to encounter problems that require them to isolate variables and solve both linear equations and inequalities.

## **How does Lesson 17 integrate real-world applications?**

Lesson 17 integrates real-world applications by presenting scenarios where students must apply their knowledge of equations to solve practical problems.

## **What skills are reinforced in this lesson?**

Skills reinforced in this lesson include critical thinking, problem-solving, and the ability to manipulate algebraic expressions.

## **Are there any specific strategies recommended for solving problems in Lesson 17?**

Yes, recommended strategies include checking work, using inverse operations to isolate variables, and graphing to visualize inequalities.

## **How can students prepare for the assessments related to Lesson 17?**

Students can prepare by reviewing previous lessons, practicing similar problems, and engaging in group study sessions to discuss challenging concepts.

## **What resources are available to assist with the concepts taught in Lesson 17?**

Resources include online tutorials, math workbooks, and study guides that provide additional practice and explanations of key concepts.

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## **A Midsummer Night's Dream Act 1, Scene 1 Translation - LitCharts**

You've come beneath her window in the moonlight and pretended to love her with your fake love songs. And you've stolen her fancy by giving her locks of your hair, rings, toys, trinkets, ...

## **No Fear Shakespeare: A Midsummer Night's Dream: Act 1 ... - SparkNotes**

Four days will quickly steep themselves in night. Four nights will quickly dream away the time. Of our solemnities. No, you'll see, four days will quickly turn into four nights. And since we dream ...

## **Midsummer Night's Dream Act 1 Quotes Flashcards | Quizlet**

If not with vantage, as Demetrius'; And, which is more than all these boasts can be, I am beloved of beauteous Hermia: Why should not I then prosecute my right? Demetrius, I'll avouch it to his ...

## *Please help me. This cat is my everything. Everytime he purrs he ...*

Some cats are just squeaky purrers. You said "everytime he purrs" so it sounds like this isn't an abrupt change in his sound. If your kitty is acting normally otherwise -- eating, playing, litter ...

## *UNDERTALE (Game Series) - Sans Boss Dialogue | Genius*

it's a beautiful day outside. birds are singing, flowers are blooming... on days like these, kids like you... Should be burning in hell .

## **One Flew Over the Cuckoo's Nest Quotes with Page Numbers**

Man, when you lose your laugh you lose your footing. All I know is this: nobody's very big in the first place, and it looks to me like everybody spends their whole life tearing everybody else ...

## **Being Erica Quotes**

The show stars Erin Karpluk as Erica Strange, a woman who begins seeing a therapist to deal with regrets in her life, only to discover the therapist (Michael Riley) has the ability to send her ...

## The Picture of Dorian Gray Full Text - Chapter II - Owl Eyes

"Just turn your head a little more to the right, Dorian, like a good boy," said the painter, deep in his work, and conscious only that a look had come into the lad's face that he had never seen there ...

Master 'Facing Math Lesson 17' with our clear guide! Dive into key concepts and practice problems. Discover how to excel in your math skills today!

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