

MATHEMATICS COMPETITION

List of Activities and Rules

Place Value Card Game

1. Four students will work together as a team.
2. Each member of the team will be given a tag for their place value: units, tens, hundreds, and thousands.
Each player will be given a set of cards with all the numbers from 0-9.
3. The adjudicator will read a number (e.g. 8 324) and students will hold up the appropriate number card that is the number for their place value (e.g. the student in the thousands position would hold up the "8" card and the student in the hundreds position would hold up the "3" card)
4. The first team to get the number in the correct places will receive points.
5. Numbers can be anywhere from 0 – 9 999.

Multiplication Flash Cards

1. Four students will work together as a team.
2. Two teams will compete against each other.
3. The adjudicator will hold up flash cards of multiplication facts.
4. The team to get the answer correct will receive a point. Students can answer individually for the team or the team can discuss the question. Each team gets only two guesses.
5. The idea is to encourage the students to know the facts without having to do the addition. Fast, but correct.

Clothesline Fraction Game

1. Children will work in teams of four.
2. Two clotheslines will be put up across poles. One pole is marked 0 and the other pole is marked 1. The clothesline represents the number line. Each clothesline will have ten clothes pins attached at specific points along the number line.
3. Students will be given ten fractions cards. The fractions will be the same fractions we covered in the maths workshop ($\frac{1}{10}$, $\frac{1}{8}$, $\frac{1}{5}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{3}{5}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{4}{5}$).
4. Students will need to work together to place the fraction cards in the correct order on the number line from least to greatest value.
5. Teams will be given a time limit of approximately 10 minutes. Scores will be determined by the number of correct answers.

Geoboards

1. A team will be four students working together.
2. Each team will be given rubber bands and a geoboard (the wooden board with sixteen nails in it that we used for teaching shapes). Students will get a few minutes to practice before we begin.
3. The adjudicator will read a list of shapes that the team will need to make on their board using the rubber bands. The list of shapes will be taken from the grades 4 and 5, 1995 syllabi.
4. The first team to get the correct answer and hold up the board will receive points.

Place Value Game

Please read the rules to the students before you begin. Please do explanations in Xitsonga and allow the students to ask questions in Xitsonga before you begin. We do not want children to not understand questions beforehand because of language problems. Maths problems, however, should be asked in English.

Teachers should not be present for the competition. Although we want the teachers to support the students, we are afraid that some teachers may not respect the decisions of the adjudicators. We also want to make sure that the teachers are not giving the answers to the children nor threatening them.

The Rules

1. Time:

Each team will be given thirty minutes for this section of the competition.

Time allocation is as follows:

Reading and explanation of rules	5 minutes
Team questions	15 minutes
Speed round	10 minutes
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Total	30 minutes

2. Set-up:

- Have the students stand in two lines.
- Give each student a place value card.
- They should stand in line according to their place value card so that the adjudicator sees: Thousands, Hundreds, Tens, Units.
- Give each child a packet of cards numbered 0 to 9.

3. Part I – Team Play:

- Give each team a number using the place values (e.g. 4 572).
- Each student should hold up the number card for their place value.
- When each child in the team has the correct number in each position, the team receives a point.
- There is a thirty second time limit for each question.
- The team leader needs to signal by raising their hand when they think they have the right answer.
- If the group gets the answer incorrect, they get another guess and another thirty seconds.
- Each team gets five questions.
- After asking a question from one team, then ask the next team.

4. Part II – Speed Round:

- Line the two teams up side by side, facing the adjudicator.
- Give each team the same question.
- First team to get the answer correct wins a point.
- This section lasts 10 minutes.

Multiplication Flash Cards

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The Rules

5. Time:

Each team will be given thirty minutes for this section of the competition.

Time allocation is as follows:

Reading and explanation of rules	5 minutes
Team questions	15 minutes
Speed round	10 minutes
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Total	30 minutes

6. Part I – Team Questions:

- Each team will be given one mathematics problem in multiplication using the flash cards.
- Each team will have 30 seconds to answer the question.
- The team should consult with each other to decide the answer.
- The only person who can respond to the answer is the team's leader. (This way we don't have all four students shouting out different answers.)
- If the team gives a wrong answer, they get another 30 seconds to provide a second guess.
- The team only gets two guesses.
- After one team's turn, we move to the next team.
- Each team will get five questions.
- Each correct answer is worth one point.

7. Part II – Speed Round:

- Each team will be given a buzzer/light so the adjudicator knows which team has the answer first.
- To the entire group of students ask one multiplication question using the flashcards.
- When the students know the answer, any student from the group may hit the buzzer switch to signify that they know the answer.
- The first group to hit the buzzer answers the adjudicator.
- If the answer is correct, the group/team gets one point.
- If the answer is incorrect, the other group of students will get a chance to answer.
- Each teams only gets two guesses.
- If nobody gets the correct answer, the question goes to the bottom of the pile and another question is asked.
- This round lasts ten minutes, regardless of how many questions are asked, so the faster the students answer the questions the greater the chances are of scoring more points.

Clothesline Fraction Game

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The Rules

8. Time:

Each team will be given thirty minutes for this section of the competition.

Time allocation is as follows:

Reading and explanation of rules	10 minutes
Activity	15 minutes
Discussion and correction	5 minutes
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Total	30 minutes

9. Explanation:

- In front of each team is a clothesline with clothespins attached at specific points.
- There are **ten clothespins**.
- One post is marked **0** and one post is marked **1** for each clothesline.
- The **clothesline** represents a **number line**.
- Each clothes pin is attached at a certain fraction of the distance of the clothesline (e.g. the clothesline for the position $\frac{1}{2}$ is located half of the way between the two posts).
- Each team should be given **10 tags** with different fractions on them.
- When the adjudicator says start, children take the tags and attach them to the clothesline at different positions.
- The children can either position the clothespins by sight, or they can arrange the clothespins of the floor or table and then position them in order.
- We have allotted **ten minutes** for this activity.
- At the end of ten minutes, the adjudicator and the students look at their answers.
- Each card gets **one point** for the correct position.
- Students can estimate the distance by sight, or they can measure via the bricks on the floor or arm lengths; however, the card needs to be attached to the correct pin in order for the students to receive points for that card.

10. Evaluation:

At the end of the activity, adjudicators should go over the answers with the students.

Geoboards

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The Rules

11. Time:

Each team will be given thirty minutes for this section of the competition.

Time allocation is as follows:

Reading and explanation of rules	5 minutes
Chance to practice	5 minutes
Speed round	10 minutes
Team questions	10 minutes
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Total	30 minutes

12. Using the geoboards:

- Each board is the same size and each board contains 16 nails.
- The boards are set up in a grid pattern, the distance between nails both horizontally and vertically is the same.
- Use the elastic bands to make different shapes by stretching the bands around the nails.
- *Make a square. Show the students.* Ask the students to make a square.
- Let them practice a little before the competition starts.
- Five minutes allocated time.




13. Speed round:

- Both teams participate against each other.
- Adjudicator names a shape.
- Students work in the team of four to construct their shape with the geoboard.
- When students have the answer, the team holds up their geoboard.
- Encourage the students to use more than one rubber band to construct the shapes so that they don't break the rubber band.
- If the answer is incorrect, tell the teams the answer is incorrect.
- The first group to get the correct answer wins a point.

14. Team play:

- Each team will be given one shape to construct using the geoboard.
- The questions can be shapes (e.g. square, rectangle) or figures with different perimeters or areas (e.g. square with perimeter of 4 units).
- Each team will have 30 seconds to answer the question.
- The team should consult with each other to decide the answer.
- The only person who can respond to the answer is the team's leader. (This way, we don't have all four students trying to hold up the geoboard.)
- If the team gives a wrong answer, they get another 30 seconds to provide a second guess.
- The team only gets two guesses.
- After one team's turn, we move to the next team.
- Each team will get five questions.
- Each correct answer is worth one point.

<p style="text-align: center;">Place Value Card Game</p> <p>School: _____</p> <p>Grade: _____</p> <p style="text-align: center;">Individual Team Scores (Part I)</p> <p>Check the number of correct answers.</p> <p>1. _____</p> <p>2. _____</p>	<p style="text-align: center;">Place Value Card Game</p> <p>School: _____</p> <p>Grade: _____</p> <p style="text-align: center;">Individual Team Scores (Part I)</p> <p>Check the number of correct answers.</p> <p>1. _____</p> <p>2. _____</p>	<p style="text-align: center;">Place Value Card Game</p> <p>School: _____</p> <p>Grade: _____</p> <p style="text-align: center;">Individual Team Scores (Part I)</p> <p>Check the number of correct answers.</p> <p>1. _____</p> <p>2. _____</p>
<p style="text-align: center;">Speed Round Scores (Part II)</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>	<p style="text-align: center;">Speed Round Scores (Part II)</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>	<p style="text-align: center;">Speed Round Scores (Part II)</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>
<p style="text-align: center;">Addition Score (Part III – Grade 5 only)</p> <p>1. _____</p> <p>Total Score for Parts I, II (and III) : _____</p> <p>Adjudicator Signature: _____</p>	<p style="text-align: center;">Addition Score (Part III – Grade 5 only)</p> <p>1. _____</p> <p>Total Score for Parts I, II (and III) : _____</p> <p>Adjudicator Signature: _____</p>	<p style="text-align: center;">Addition Score (Part III – Grade 5 only)</p> <p>1. _____</p> <p>Total Score for Parts I, II (and III) : _____</p> <p>Adjudicator Signature: _____</p>

<p style="text-align: center;">Multiplication Flash Cards</p> <p>School: _____</p> <p>Grade: _____</p> <p style="text-align: center;">Team Question Scores (part I)</p> <p>6. _____</p> <p>7. _____</p> <p>8. _____</p> <p>9. _____</p>	<p style="text-align: center;">Multiplication Flash Cards</p> <p>School: _____</p> <p>Grade: _____</p> <p style="text-align: center;">Team Question Scores (part I)</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>	<p style="text-align: center;">Multiplication Flash Cards</p> <p>School: _____</p> <p>Grade: _____</p> <p style="text-align: center;">Team Question Scores (part I)</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>
<p style="text-align: center;">Speed Round Scores (Part II)</p> <p>Tick the number of correct answers  Ten minutes limit.</p>	<p style="text-align: center;">Speed Round Scores (Part II)</p> <p>Tick the number of correct answers  Ten minutes limit.</p>	<p style="text-align: center;">Speed Round Scores (Part II)</p> <p>Tick the number of correct answers  Ten minutes limit.</p>
<p>Total Score for Parts I and II: _____</p> <p>Adjudicator Signature: _____</p>	<p>Total Score for Parts I and II: _____</p> <p>Adjudicator Signature: _____</p>	<p>Total Score for Parts I and II: _____</p> <p>Adjudicator Signature: _____</p>

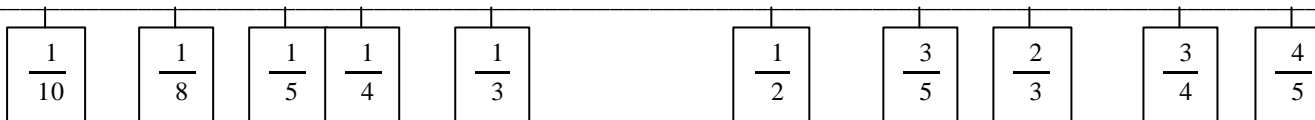
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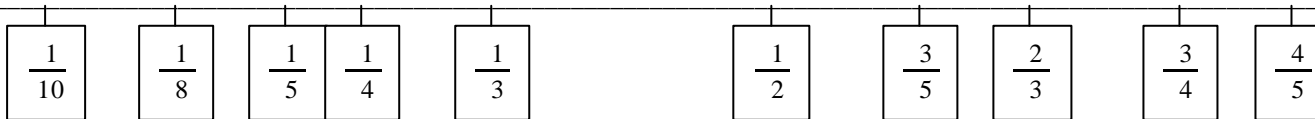
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