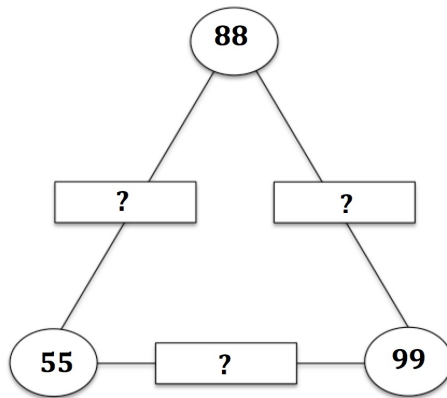


## THE CHECKIT GAME



The Checkit Game is suitable for all ages because you can choose the type of numbers and the operation that you will use.

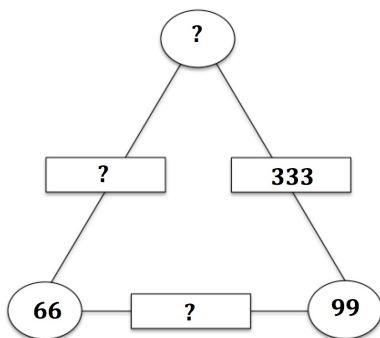
You can play this game with  
(1) addition and subtraction or with  
(2) multiplication and division, whichever you choose.

The numbers on the edges of the triangle are the sum in Game 1 and the product in Game 2 of the numbers at the vertices.

In this example Game 1 would have 143, 187 and 154 on the edges and Game 2 would have 4840, 8712 and 5445 on the edges.

1. The players must agree whether to play version (1) or version (2) of the game.
2. The players must agree on what numbers are allowed. For example whole numbers, or integers, or fractions, or decimals, or powers of 2, 3, 4 and 7 or, to keep the numbers small, just 0 to 10 at the vertices.
3. Flip a coin to decide who goes first.
4. Players take it in turns to fill in a number in an empty box.
5. Players check if the numbers entered are correct. If a player makes a mistake and is challenged by an opponent before that opponent enters another number, then he loses the game and his opponent wins a point.
6. When they have put numbers in all 6 boxes, both players check. If there are any mistakes then both players lose a point. If everything is correct both players win a point.
7. The first player to score 5 points wins the game.

## HELP



This is another example for Game 1.

Work out the numbers to go in the empty boxes.

To find the number to go in the top box remember that  
 $? + 99 = 333$ .

Click [here](#) for the answer.

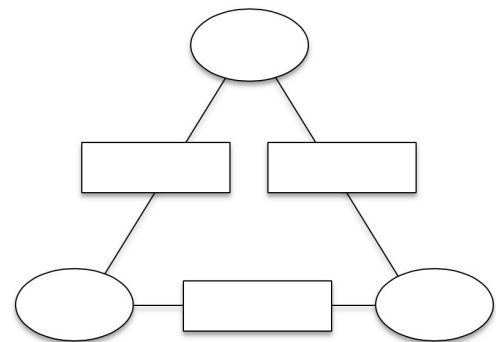
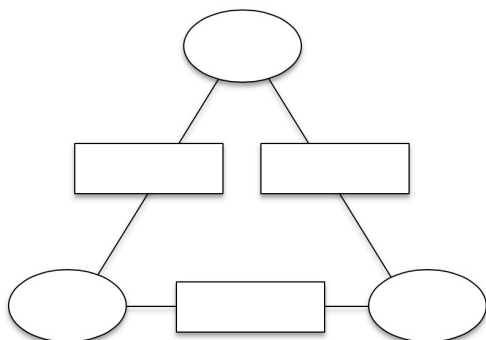
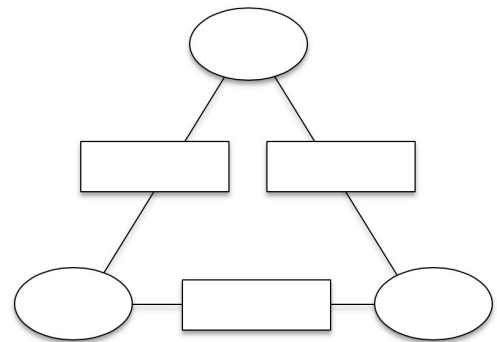
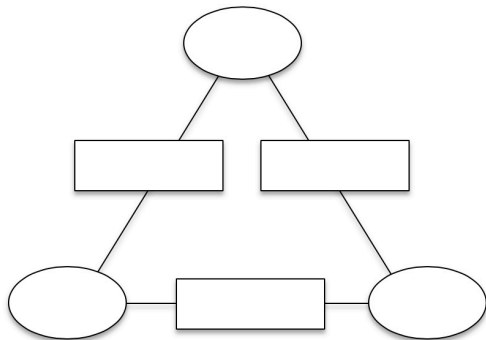
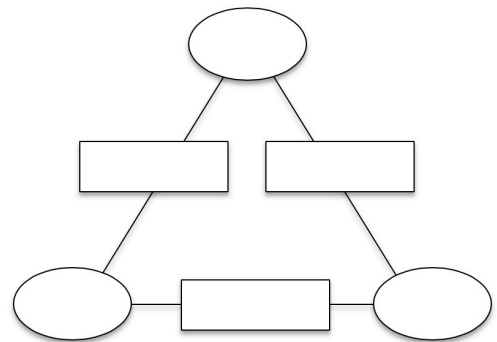
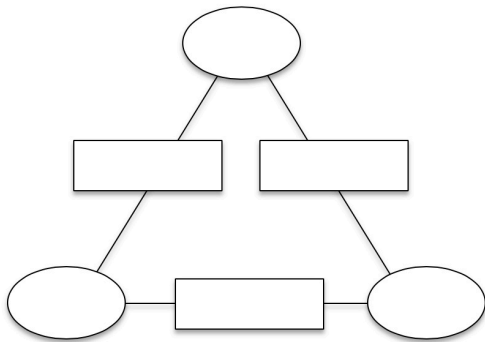
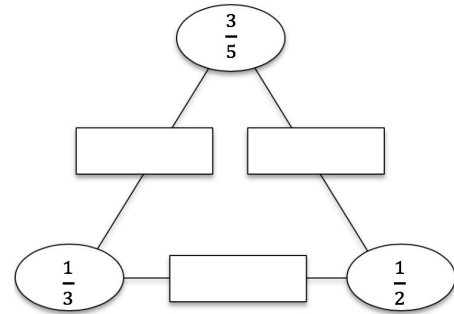
## NEXT

Complete this Checkit for both addition and multiplication.

Click [here](#) for the answers.

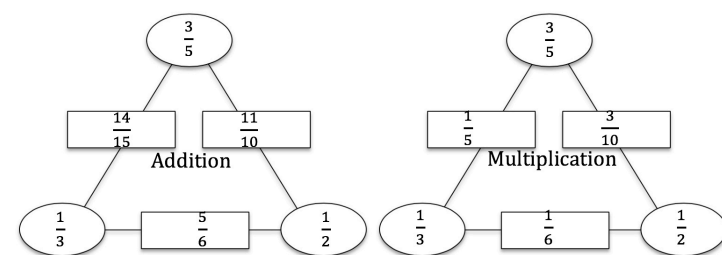
### Checkit Game Version 3

1. The players must agree on the type of numbers, on the operation to be used and on the time allowed.
2. Both players draw a Checkit frame and fill in 3 of the 6 numbers.
3. They swop the frames and, in the given time, players fill in the other 3 numbers and score a point for each correct number.
4. Play 3 rounds and the player with the highest score wins.



## NOTES FOR TEACHERS

### SOLUTION



Examples of the game.

### Why do this activity?

The game provides an enjoyable way for learners to practice mental arithmetic with a partner. The game can be used at many different levels of challenge.

### Learning objectives

In doing this activity students will have an opportunity to:

- learn multiplication tables;
- develop numeracy and mental arithmetic fluency;
- work with a partner in a non-competitive way with both learners offering challenges to each other and both trying to improve their skills.

### Generic competences

In doing this activity students will have an opportunity to:

- **think mathematically**, reason logically and apply knowledge and skills;
- **play challenging games**, with consideration for others, and be prepared to be challenged and to lose so as to learn and to develop skills.

### Suggestions for teaching

Checkit can be used frequently for short periods of time to give practice in doing different calculations. For example, the game can be used as part of a review of addition of fractions and in a similar way for other types of calculations.

As a review, Checkit can be played at first with the whole class split into 2 teams and the teacher giving some explanations. (See for example the discussion involving a bar of chocolate in this video <https://youtu.be/QRMZl9H2kqQ>). Then pairs of players could play just 3 times. Because it may be difficult for the learners to check their own calculations, pairs could then come to the board and write up the 6 numbers with which their game ended, and these could be checked by the whole class.

Teachers can choose to give different levels of challenge to different learners to cater for inclusion and individual needs, including offering more challenge to high flyers.

There is plenty of scope for all learners to get satisfaction by improving their performance. One way to achieve this is with the rule that players must enter their next number before their opponent counts slowly to 10. Speed-scores are recorded, so if A

fills in a number correctly when the count is at 4, he or she gets a speed-score of 4. Learners can aim to make their speed-scores lower and lower.

## Key questions

- If you know the numbers in the rings at the vertices, what rule are you using to find the number in the rectangle between?
- If you know 2 of the 3 numbers on an edge what rules are you using to find the 3rd number?
- Those 2 numbers are filled in, how will you find that number? (pointing to an empty box).

## Follow up

Checkit <https://aiminghigh.aimssec.ac.za/years-4-8-checkit/>



Subscribe to MATHS TOYS if you have not already done so.

<https://www.youtube.com/mathstoys>

Or go to YouTube, search for Maths Toys.

Go to the AIMSSEC AIMING HIGH website for lesson ideas, solutions and curriculum links: <https://aiminghigh.aimssec.ac.za>

Download the whole AIMSSEC collection of resources to use offline with the AIMSSEC App <https://aimssec.app> Also available to download from Google Play.

Note: The Grades or School Years specified on the AIMING HIGH Website correspond to Grades 4 to 12 in South Africa and the USA, to Years 4 to 12 in the UK and up to Secondary 5 in East Africa.

For resources for teaching A level mathematics (Years 12 and 13) see <https://nrich.maths.org/12339>

New material will be added for Secondary 6.

The mathematics taught in Year 13 (UK) and Secondary 6 (East Africa) is beyond the school curriculum for Grade 12 SA

	Lower Primary Approx. Age 5 to 8	Upper Primary Age 8 to 11	Lower Secondary Age 11 to 15	Upper Secondary Age 15+
South Africa	Grades R and 1 to 3	Grades 4 to 6	Grades 7 to 9	Grades 10 to 12
East Africa	Nursery and Primary 1 to 3	Primary 4 to 6	Secondary 1 to 3	Secondary 4 to 6
USA	Kindergarten and G1 to 3	Grades 4 to 6	Grades 7 to 9	Grades 10 to 12
UK	Reception and Years 1 to 3	Years 4 to 6	Years 7 to 9	Years 10 to 13