

Making Math More Fun

Math Games Ideas



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Contents

Index of Skills
Hints for Using Games

Math Games Ideas

1. Addition Duel
2. Basketball Facts
3. Battleships
4. Build A Number
5. Build One
6. Bundles
7. Buzz
8. Coin Toss
9. Decimal Aim
10. Dominoes
11. Dominoes – Keepers
12. Dominoes – Sevens
13. Double Dice Addition
14. Double Dice Multiplication
15. Double Draw
16. Families Race
17. Find It First – Facts
18. Find It First - Numbers
19. Find It First – Place Value
20. First to 100
21. Four In A Row Bingo
22. Fraction Fun
23. Grab and Group
24. Groups – Addition
25. Guess It
26. Hangman
27. Higher or Lower
28. Jumbled Operations
29. Largest Number
30. Last One Loses
31. Make 20
32. Math Champs
33. Money Bucket
34. Multiples Race
35. Nim
36. Number Hats
37. Number Snap
38. Number Tic Tac Toe
39. Number Washing Line
40. Odds and Evens
41. Patterns – Simple
42. Patterns – Shapes
43. Patterns – Numbers
44. Percentage Prizes
45. Pirates
46. Pizza Plates
47. Round Off Bingo
48. Round The World
49. Scan and Grab
50. Secret Strategy
51. Show It
52. Stretch Race
53. Take Off
54. Tangram Tangles
55. Time Bingo
56. Toothpick Grab
57. Twenty Questions
58. Vanishing Numbers
59. What's My Number?
60. What's My Shape?
61. Who Am I?

Black Line Masters for Math Games

Skill	Game Numbers
Addition	11, 12, 20, 25, 26, 28, 31
Addition Facts	1, 2, 13, 16, 17, 21, 24, 32, 37, 48, 49
Calculators	58
Compare Numbers	4, 8, 9, 10, 27, 29
Coordinates	3, 45
Counting	6, 7, 10, 34, 56
Decimals	5, 8, 9, 27
Division	23, 25, 26, 28, 31
Division Facts	2, 15, 16, 17, 21, 24, 32, 48, 49
Fractions	2, 22, 46
Money	33
Multiples	34
Multiplication	25, 26, 28, 31
Multiplication Facts	1, 2, 11, 14, 16, 17, 21, 24, 32, 48, 49, 50
Number	4, 6, 18, 36, 43, 51, 59, 61
Odd and Even	40
Ordering Numbers	39
Patterns	41, 42, 43
Percentages	44
Place Value	4, 6, 19, 29, 52
Rounding Off	47
Shapes	42, 54, 60
Strategy	30, 35, 60
Subtraction	25, 26, 28, 31, 53
Subtraction Facts	1, 2, 16, 17, 21, 24, 32, 48, 49
Time	55

Hints for Using Games

Parents

Selecting the games

- Not all games will be suitable for the ability level of your child. Ages are given as a general guide and may not be applicable to your child.
- Your child's teacher may be able to help identify which games would be most suitable.
- Involve your child in selecting the games that he/she would like to play. If he/she is able, let him/her read the instructions and choose a game or you can describe how the game is played and let the child choose. Letting the child read the instructions is a great reading comprehension activity.
- If your child has a favorite game it can't hurt to let them play it over and over.

Preparing the games

- Print the games that you require for your child. If the game requires cards to be printed or made, store the cards in a separate plastic bag, a paper bag or an envelope. Allow the child to decorate the bag or the envelope with drawings or fancy writing. Store games in a box. A shoe box can be covered with paper and decorated by the child.
- Card can be used to make the games but laminating the card will make the games more durable and more visually appealing.
- Involve the child in preparing the games, e.g. cutting out pieces and putting into bags.

Playing the games

- Set aside a special games time each day, e.g. just before bed or straight after homework is done.
- Involve the whole family in playing the games. Older children can also play. Once a week involve the whole family in a games session.
- Discuss with you child the skills that your child can improve by playing the game.
- Encourage and praise the child for their efforts. Emphasize that 'having a go' is more important than winning.
- Stop playing the games before the child has had enough. Only play while the child is still enjoying the game.

- To make the games more interesting, sweets can be used as a prize for the winner.
- Although many games have been designed for 2 -4 players, some games can be played by one child. If a game requires 2 players, you can play against your child.

Teachers

Selecting the games

- These games are an ideal way to cater for different ability levels in your classroom. Students who are struggling may be given easier games to practice basic skills.
- The more advanced games can be used to extend brighter students.
- Games can be used to reinforce the skills that are being taught in the classroom, e.g. When time is being taught, play Time Bingo.
- Students can also be involved in selecting which games they would like to play. This will create a sense of ownership of the games.
- The games can be used as a reward for working well. Allow students to select the game they would like to play.

Preparing the games

- Games that require cards can be printed in the size shown or can be enlarged on a photocopier to create large cards that can be used for whole class games.
- Students can be involved in preparing the games. Students can print the cards, cut out cards and decorate the bags or envelopes. This will lighten the teachers work load and give students a sense of ownership of the games. The students will take pride in the fact they made the games. At the same time it is also giving the students responsibility.
- Laminating the cards will make them more durable and also more appealing.

Playing the games

- These games are suitable for a variety of classroom uses.
- Whole class games can be made by enlarging the games on a photocopier. The class can be divided into teams and one player at a time can come to the front for a turn. Students can also be seated in a circle and sit with their teams. The cards can be placed in the centre of the circle.

- When playing with the whole class, this provides an ideal time to discuss the skills relevant to the game, e.g. discuss place value when playing a number game.
- The games also provide an ideal introduction or conclusion to a lesson on a particular skill, e.g. Play Build One as an introduction to a lesson on decimal numbers.
- These games can be part of a Math activity centre or an activity for a Math rotation.
- These games are also an ideal activity for students who finish work early. I always have a box of games at the back of the classroom. Students who finish work early then choose a game and play quietly in a designated area.
- Games can also be sent home with students so they can play them with their parents. Parents will enjoy this as it is a fun way for them to help their child and be involved in what the child is doing at school.

Math Games Ideas

1. Addition Duel

7+ years

2 players or teams

Need – set of playing cards with the jacks, queens, kings and jokers removed. Aces are to count as 1.

Children will be practicing addition without even realizing it.

Makes a good classroom game with 2 teams playing against each other!

Shuffle the cards and deal them out.

Each player puts their cards in a pile facing down.

Together players flip the top card over and place it in the centre.

The first player to add the amounts on the two cards together and call out the answer takes the cards.

If a player calls an incorrect answer the cards are returned to the bottom of the pile. When all cards have been drawn the winner is the player with the most cards.

Variations

Multiplication Duel / Subtraction Duel

Played as above but players multiply or find the difference instead.

See **Double Draw** for a similar game of division.

2. Basketball Facts

5+ years

2 players or teams

Need – soft foam ball, waste bin or bucket to be the hoop

Fun way to practice number facts!

Two players stand side by side. If playing in teams, teams can line up in two lines with the first player in each line taking the first turn and then moving to the end of the line after this turn.

The caller calls a number fact, e.g. $3+9$, $15-6$, 4×5 or $36 \div 4$.

The first player to call out the correct answer then has a turn at shooting for a point (throwing the ball into the waste bin or bucket). The player scores a point if he is successful.

If playing in teams, the next two players then have a turn.

VARIATION

Basketball Fractions

This game is played in the same way with the caller calling out a fraction and a number, e.g. What is $\frac{3}{4}$ of 12?

3. Battleships

8+ years

2 players

Need – pencil, paper (squared paper if possible)

A great game for practicing coordinates!

Use squared paper if available. Each player needs 2 grids that are 10 squares by 10 squares. Label A-J along the bottom and 1-10 down the left side.

Each player marks in their ships

- 1 battleship (4 squares long)
- 2 cruisers (3 squares long)
- 3 destroyers (2 squares long)
- 4 submarines (1 square).

Use B's, C's, D's and S's. No two vessels may touch.

Players take turns to try to hit the opponent's fleet by calling out a grid coordinate, e.g. H4. Keep a record of what you call on the empty grid.

The other player tells if it is a miss or hit. If it is a hit he tells the type of vessel.

Players put a X on their fleet when it is hit. Players mark their hits on the enemy with a letter to show the type of vessel. Misses can be marked with a 'o'.

First person to destroy the enemy's fleet is the winner.

4. Build A Number

7+ years

2+ players or teams

Need – 1 or 2 sets of number cards (see BLM 1)

Great for teaching place value skills!

Decide on the size of the numbers to be built, i.e. 3, 4, 5 or 6 digits. On a board or a piece of paper draw a box for each digit. Do this for each player or each

team, e.g.

--	--	--

--	--	--

 for 2 players making 3 digit numbers.

Players or teams take turns to draw a Number Card and place or write it in a box. (Use 2 sets of cards if needed.)

Continue until each box has a digit. Players can't move a digit once it has been put in a box. The player or team with the highest number is the winner.

Example of a game – The player with **690** is the winner and gains a point.

After 1st draw

	5	
--	---	--

		0
--	--	---

After 2nd draw

	5	3
--	---	---

6		0
---	--	---

After 3rd draw

4	5	3
---	---	---

6	9	0
---	---	---

Variations

Lowest Number

After a few rounds change the rules so that the lowest number wins.

Closest Number

The rules can also change so the winner is closest to a given number, e.g. 500.

5. Build One

10+ years

2+ players

Need – 10x10 grid for each player – See Black Line Master 12

Decimal cards – See Black Line Master 13

Develops concept of decimal numbers!

Cards are placed in a pile face down.

Players take turns to turn over a card

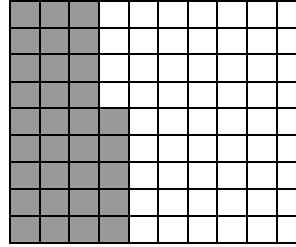
and read the decimal number. They

then color this amount on their grid,

e.g. If a player draws a card with **0.35**, →

they then color this much of the grid.

First to color the whole grid is the winner.



6. Bundles

6+ years

2+ players

Need – popsicle sticks, dice, elastic bands

A game to develop tens place value concepts.

Popsicle sticks are placed in the center.

Before beginning decide what the winning number is to be, e.g. 50, 80 or 100.

Players take turns to roll the dice and take that number of popsicle sticks.

When a player has tens sticks they can bundle these into a bundle of ten using the elastic band.

The first player to reach the winning number, e.g. 50 which is 5 bundles of ten is the winner.

HINT – During play, encourage players to count their sticks, e.g. “3 bundles and 7 sticks is 10, 20, 30 and seven more make 37.”

7. Buzz

8+ years

2+ players

A game that requires concentration and a need to know Times Tables!

Great for classrooms!

Decide upon the number that will have its multiples missed (a number from 3-9).

For larger groups children could stand in a circle.

Count around the group saying one number each but when a multiple of the chosen number comes up, children don't say the number but instead say 'BUZZ'. E.g. If 4 is the chosen number, counting around the group would sound like this - **1, 2, 3, BUZZ, 5, 6, 7, BUZZ, 9, 10, 11, BUZZ** etc.

A player is out if he makes a mistake.

Usually the game will stop at 100. Another number can then be chosen.

For older children it is possible and good math practice to go over 100.

Variation

Double Buzz

A more advanced version is to also use BUZZ for any number that contains the chosen number as one of its digits, e.g. If 4 is the chosen number, counting around the group would sound like this - **1, 2, 3, BUZZ, 5, 6, 7, BUZZ, 9, 10, 11, BUZZ, 13, BUZZ**. For **24, 34, 40 and 41** a player would say **BUZZ**.

8. Coin Toss

6+ years

2-4 players or teams

Need – a large 6x6 grid filled with random numbers to be studied, coins (counters or bottle tops can be used).

Fun way to compare values of numbers!

The large grid is placed on the floor. Use 2 digit numbers if studying 2 digit numbers. Or use 3, 4 or 5 digit numbers. Each player or one player from each team takes a turn at tossing a coin onto the grid. If the coin lands off the grid the player is out. If the coin lands on 2 spaces the space that has most of the coin is the number that is used. Players compare the numbers. The player whose number is the largest, scores a point. Repeat keeping score.

Variation

Decimal Coin Toss

Played as above but the grid can be filled with decimal numbers.

9. Decimal Aim

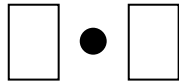
9+ years

2-6 players or teams

Need – 2 sets of number cards (see BLM 1)

Develops decimal number concepts!

Before starting
card or paper
each player or



draw boxes the size of the cards on a piece of
to look like this.
team.

Draw one for

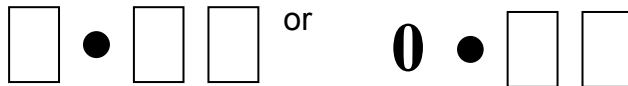
At the start of each round decide upon the number to aim for in that round, e.g. **6**.
Each player or team takes 3 of the number cards and chooses 2 of them to place
in the boxes to make a number as close as possible to the target number.
If a player picked the cards – 2, 9, 7, they could choose to make 7.2.
The player or team with the number closest to the target number scores a point.

Variation

Decimal Aim

Played as above but 4 cards are draw to make a number with 2 decimal places.

e.g.



10. Dominoes

4+ years

2-4 players

Need – set of Dominoes

Develops counting and matching skills.

Basic Rules – Great for littlies.

Dominoes are laid out face down.

Players pick their dominoes. (If 2 players – pick 7 each. If 3-4 players pick 5 each.)

Player with the highest double starts by laying a tile in the centre.

Other players take turns at joining to a tile joining a number to the same number.
If a player can't put down a tile, he picks one up.
First player to put down all of his tiles is the winner.

11. Dominoes - Keepers 6+ years 2 players or 2 teams

Need – set of Dominoes

Helps children learn addition facts.

All of the dominoes are placed in the centre face down.

Both players or one from each team pick up a domino at the same time.

Each player tells the sum of the dots on their domino, e.g. $2+4=6$, $5+3=8$.

The player with the highest answer keeps both dominoes. If both players have the same answer, each of them keeps a domino. The winner is the player or team with the most dominoes when all dominoes have been picked up.

Variation

Dominoes – Keepers – Multiplication

Played as above but players multiply the two ends of the domino instead of adding.

12. Dominoes - Sevens 6+ years 2-4 players

Need – set of Dominoes

Helps children learn addition facts.

Played as above in Game 10. Dominoes but this time only combinations that add to seven can be put down, e.g. if a 2 is down a 5 can be joined to it.

13. Double Dice Addition 6+ years 2- 4 players

Need – 2 dice for each player, counters, markers (or sweets)

Develops basic addition skills.

Each player rolls 2 dice. The numbers shown on a players dice are then added together. The player with the highest number wins the round and takes a counter. Continue play until a player has a given number of counters, e.g. 10.

Variation

Double Dice to 100

Players can also add their scores for each round and the winner can be the first to reach 100.

14. Double Dice Multiplication 8 + years 2- 4 players

Need – 2 dice for each player, counters, markers (or sweets)

Develops basic multiplication skills.

Each player rolls 2 dice.

The numbers shown on a players dice are then multiplied together.

The player with the highest number wins the round and takes a counter. Continue play until a player has a given number of counters, e.g. 10.

15. Double Draw

9+ years

2- 4 players

Need – 2 sets of number cards (BLM 1 and BLM 2) (2 copies of each BLM one set in one color and the other set in another color) Remove the cards with 0 on them.

Develops basic division skills.

Cards are shuffled and placed in 2 piles. (Keep each set of cards in a separate pile.)

First player takes a card from each pile and turns it over.

If the numbers are the same the player scores a point.

If one number can be divided evenly into the other number, the player scores a point.

The cards are then put in 2 discard piles and the next player has a turn.
Winner is the person who has the highest score when all cards have been drawn.
OR The game can continue for longer if the discarded piles are shuffled and returned to play.

16. Families Race

8+ years

2+ players or teams

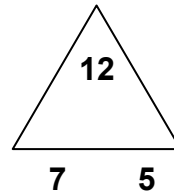
Need – pencil and paper

Helps children to recognize the relationship between addition and subtraction or multiplication and division!

Play as a team game in the classroom with children in the team taking turns to write one fact.

Addition and Subtraction

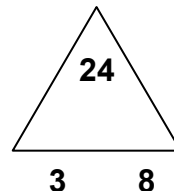
Show children a triangle of related numbers, e.g.



Children then race to be the first to write the 2 addition facts and 2 subtraction facts in the family, i.e. $7+5=12$, $5+7=12$, $12-5=7$, $12-7=5$.

Multiplication and Division

Show children a triangle of related numbers, e.g.



Children then race to be the first to write the 2 multiplication facts and 2 division facts in the family, i.e. $3 \times 8 = 24$, $8 \times 3 = 24$, $24 \div 3 = 8$, $24 \div 8 = 3$.

17. Find It First – Facts 5+ years 2 players or teams

Fun way to practice number facts!

On the board or a piece of card write the answers to the facts to be studied.

e.g. to study multiplication facts write 12, 15, 18, 20, 21, 24, 25, 27, 28, 30, 32, etc

Write the numbers low enough for the players to reach them. The two players stand beside the numbers.

If playing in teams one person from each team is sent to the board at a time.

The caller calls a number fact, e.g. 4×8 and the first person to find the answer and point to it scores a point. If playing in teams the next two players come to the board.

18. Find It First – Numbers 5+ years 2 players or teams

Practice recognition of numbers and digits!

On the board or a piece of card write the numbers to be studied.

e.g. to study digits from 0-9, write the digits from 0-9.

- to study 2 digit numbers write a selection of 2 digit numbers, e.g. 23, 45, 76, 29, 44, 40, 14 etc.

- for 3 or 4 digit numbers write a selection of 3 or 4 digit numbers.

Write the numbers low enough for the players to reach them. The two players stand beside the numbers.

If playing in teams one person from each team is sent to the board at a time.

The caller calls a number and the first person to find it and point to it scores a point. If playing in teams the next two players come to the board.

19. Find It First – Place Value

Practice place value!

6+ years 2+ players or teams

On the board or a piece of card write several numbers to be studied.

e.g. to study 2 digit numbers write a selection of 2 digit numbers.

- to study 3, 4, or 5 digit numbers write a selection of 3, 4 or 5 digit numbers.

Write the numbers low enough for the players to reach them. The two players stand beside the numbers.

If playing in teams one person from each team is sent to the board at a time.

The caller calls out the value of the number that is to be found,

e.g. Find a number that has 4 tens. or Find a number that has 3 ones, 6 tens and 2 hundreds. The first person to find it and point to it scores a point. If playing in teams the next two players come to the board.

20. First to 100

7+ years

2 players

Great way to practice addition!

Start with 0.

Players take it in turns to add any number from 1-9.

The player who reaches 100 first is the winner. The winning player must reach 100 exactly to win.

E.g. Black is the 1st player and red is the 2nd player.

6+7=13+8=21+9=30+7=37+2=39+8=47+5=52+9=61+5=66+8=74+5=79+6=85+5=90+1=91+9=100 Red is the winner.

21. Four in a Row Bingo

5+ years

2+ players

Need – Bingo cards (premade or created by the players), counters, cubes (or sweets)

A fun game to practice addition, subtraction, multiplication or division facts.

If players are to make their own bingo cards, the caller writes the answers to the 16 facts to be studied on the board. (More than 16 facts and answers can be used if desired.) Players then write the answers on 4x4 grid in any order.

The caller then calls a fact and the players cover the answer.

The first player to cover a line of 4 in a row, column or diagonal is the winner and calls out Bingo. The caller then checks that the correct answers have been covered. Repeat.

Variation

Five in a Row Bingo

Played as above but use a grid of 5x5 and 25 facts instead. The winner is the first to create a line of 5.

22. Fraction Fun

10+ years

2+ players or teams

Need – 2 sets of cards one with fractions and one with numbers, See Black Line Masters 3 and 4 for simple sets

Develops the concept of fractions and provides practice at working out fractions of numbers.

Turn cards face down. Each player or team selects one Fraction Card and one Number Card.

Players then work out the amount that they have to the nearest whole number, e.g. $\frac{3}{8}$ of 48 is **18**.

The player or team with the most is the winner of the round.

Scoring can be done in 2 ways.

- The winner can score a point.
- Or each player or team can record the amount for that round and total their amounts at the end of the game.

FOR THE CLASSROOM – I use this game as a game show. Every student participates in one round. Winner of each round goes into the final. Winner of the final wins a prize. Can be played in one day or held over a week with one round each day. (See also – ‘Percentages Prizes’ for a similar game show)

23. Grab and Group

7+ years

2+ players

Need – 30+ markers or small items

Helps children to develop the concept of division!

Older children can practice dividing with this game!

The first player grabs a small handful of markers. (Players are not allowed to count how many as they grab.)

Now the player sees if she can make

- groups of 2 with her markers. She scores 2 points if she can.
- then groups of 3. She scores 3 points if she can.
- then groups of 4. She scores 4 points if she can.
- then groups of 5. She scores 5 points if she can.
- then groups of 6. She scores 6 points if she can.

Groups must be made without any marker being left over.

The player records her score and the next player has a turn to grab and group.

HINT – Younger children will need to put the markers into groups but older children can be encouraged to count the markers and divide by 2, 3, 4, 5 and 6.

24. Groups - Addition

7+ years

12+ players

Need – cards with an addition fact on each one – several cards must have the same answer

Great revision and practice for addition facts (or multiplication, subtraction or division facts)!

Great classroom game but it will be noisy!

Each child is given a card with a fact on it.

On 'GO' children move around calling out their facts and try to find their group, i.e. the others that have the same answer as they do.

Children are told previously how many people will be in each group.

When the group is all together, they quickly sit down as a group.

First group to assemble is the winner.

Variations

Groups – Multiplication, Subtraction or Division

Players can be given cards with multiplication, subtraction or division facts.

25. Guess It

8+ years

2+ players

Develops concept of addition, subtraction, multiplication and division.

Great classroom game!

One child or an adult writes a basic operation but does not show it to the others, e.g. $4 \times 3 = 12$.

Others have to guess the operation by asking questions about the digits and signs. E.g. Does it have a 7 as a digit? No

Does it have an addition sign? No

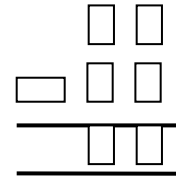
Does it have a 3 as a digit? Yes

First child to guess the operation is the winner.

If there are only 2 players (one to write the operation and one to Guess It) keep count of how many questions each players asks before the operation is guessed. For older children the operation could be more complex,

4 5
+ 3 8
8 1

e.g. For a more complex operation show the children the set out of the operation like this.



Variations

Guess It Mixed Signs

Players can also write operations with 2 signs, e.g. $5 \times 2 - 6 = 4$.

26. Hangman

7+ years

2+ players

A challenging mathematical version of an old favorite!

If you don't want to use a Hangman, use another simple drawing instead, e.g. a flowerpot or a race car.

This game is played like the word version but uses a numerical equation instead. Draw one dash for every digit and symbol in the equation. This can be adjusted to the ability level or the students.

e.g. _____ (5+6=15)
 _____ (87-25=62)

For more complex equations, players could be permitted to use a calculator.

e.g. _____ 56x27=1512

Players take turns to say a digit or a symbol while the recorder places any correct digits or symbols in the equation.

The recorder is the winner if the Hangman is completed or the player who gives the final digit or symbol is the winner.

27. Higher or Lower

7+ years

2+ players

A thinking game to improve number skills! Great for classrooms!

This is a 'Guess my number game'.

First decide how big the number can be, i.e. is it between 0 and 100; 100 and 1000 or 1000 and 10000. This will depend upon the ages of the children.

One person is IT. (This might be an adult or the teacher.)

IT thinks of a number and writes it down without telling or showing the others.

The other players take turns guessing the number and listening to the clues given by IT.

These clues will only be 'Higher' or 'Lower'.

IT says 'Higher' if her number is higher than the guessed number or 'lower' if her number is lower than the guessed number.

Winner is the child who guesses the number.

HINT – children might need to be encouraged to listen to the clues.

Variations

Higher or Lower - Decimals

Played as above but with a decimal number instead.

Decide how many decimal places the number will have before starting, i.e. 1, 2 or 3 decimal places.

Players could be told that the number is between 2 and 4. (2.56)

28. Jumbled Operation

7+ years

2+ players

Really makes players think!

Players are shown the digits and signs from an operation in jumbled form.

E.g. 1, 3, 6, 7, +, =

The first player to make it into a correct operation is the winner of that round.

For older children the format of the operation could be show to them.

E.g. Complete this operation using 1, 3, 5, 5, 6, 8, -

$$\begin{array}{r} \square \square \\ \square \square \\ \hline \square \square \\ \hline \end{array}$$

Answer

$$\begin{array}{r} 86 \\ - 35 \\ \hline 51 \end{array}$$

At times several answers may be possible.

29. Largest Number

8+ years

2+ players

Need – 3, 4, 5 or 6 dice, pencil and paper

Great for classrooms!

Each player rolls the dice. Use

- 3 dice for children to practice 3 digit numbers
- 4 dice for children to practice 4 digit numbers
- 5 dice for children to practice 5 digit numbers
- 6 dice for children to practice 6 digit numbers

Each player rolls the dice and records the numbers that are shown, e.g. 3 4 1 6.

The players then arrange these digits into the largest possible number that they can, e.g. 6431

The player with the largest number scores 1 point.

30. Last One Loses

6+ years

2 players

Need – 16 matches (markers, beads, or buttons will do)

A game to develop strategic thinking!

Lay the matches in lines as shown below.

|

|||

|||||

|||||||

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Players take turns to remove 1, 2, 3 or 4 matches from a row on their turns.
The player to remove the last match is the loser.

31. Make 20

7+ years

2+ players

Need – 5 sets of number cards (see BLM 1)

or a pack of playing cards with jacks, queens, kings and jokers removed,

Aces are to be 1.

A game to develop skills with math facts and equations!

Shuffle cards and place in a pile in the centre or spread out cards face down.

Players take turns to pick up 3 cards.

If a player can make the numbers on the cards total 20 in some way they get to keep the cards, e.g. $7+8+5=20$, $2 \times 8+4=20$, $5 \times 5-5=20$, $(1+3) \times 5=20$.

If a player can not find a way to total to 20 they return the cards to the bottom of the pile or to the centre if cards are spread out (then mix up the cards again).

When all cards have been taken or only a few remain, players total the numbers on their cards. Highest score is the winner.

For a simpler version winner could be the player with the most cards.

Variation

Make 10

A simpler game where only 2 cards are picked up each time.

32. Math Champs

6+ years

3+ players

A quick game to practice addition, subtraction, multiplication or division.

A play off can be held in the classroom. Winner can verse the teacher!

Two challengers are chosen and stand either side of the caller.

Caller calls out a number fact, e.g. $9+6$. First player to call out the answer scores a point. Caller can hold up 1 finger on this player's side. Play continues until one of the players has 3 points and is the winner.

33. Money Bucket

6+ years

2+ players or teams

Need – bucket, coins (real or plastic play money)

A fun way to practice adding money amounts!

Set up the bucket about 6 ft in front of a starting line.

Players or teams take turns to toss the coins into the bucket.

If a coin misses the bucket it can't be picked up again.

When all coins have been tossed, the player or team total the amount in the bucket.

After each player or team has had a turn, the winner is the one with the highest amount.

Several rounds of the game could be played, keeping a running total.

34. Multiples Race

9+ years

2+ players

Need – pencils and paper

Practices counting skills and multiples!

Select the number to have its multiples written, e.g. 4 or 7 or 20.

On 'GO' the players start by writing the selected number and multiples of that number in counting order. Give a time limit, e.g. 1 minute.

The player who correctly writes the most multiples is the winner.

35. Nim

6+ years

2+ players

Need – Several markers or counters (12+)

A game of strategy! Similar to **Last One Loses!**

In this ancient game markers are placed in 3 uneven piles, e.g. 3, 4, 5.

Players take turns at removing any number of markers from 1 pile.

The winner is the player who picks up the last marker.

HINT – Start with 12 markers and play several games. Then increase the number of markers.

36. Number Hats

7+ years

3+ players

Need – hats, numbers on cards or stickers with numbers on them (select numbers suitable for the age group)

A fun game that gets children thinking about numbers and their properties!

Two or three players wear a hat and have a number on a card attached to the front of the hat so that they can't see it but everyone else can.

Each player then asks Yes/No questions about their number. E.g. Am I an even number? Am I larger than 100? Do I have 3 digits?

When a player receives a No answer, the next player starts his turn.

The winner is the first player to guess her number correctly.

37. Number Snap

7+ years

2 - 4 players

Need – pack of playing cards with the colored cards removed. Ace represents 1.

A fun way to practice addition

Before starting the game decide what the total for the game is to be – **10, 11, 12 or 13**. Deal out all of the cards to the players.

Players take it in turns to turn over a card and place it in the centre.

Cards in the centre are placed on top of each other.

When the 2 top cards add to the total for the game, players can 'Snap' (slap their hand onto the top card) and call out the total. The first player to do so wins the

pile and adds it the bottom of her pile. A player is out of the game if he runs out of cards. Last player to have cards left is the winner.

38. Number Tic Tac Toe

7+ years

2+ players

Need – pencil and paper

Children will be practicing addition without even realizing it.

One player uses odd numbers – 1, 3, 5, 7, 9; while the other player uses even numbers – 0, 2, 4, 6, 8.

On a Tic Tac Toe grid, players take turns to write one of their numbers. The player with odd numbers starts. Each number can only be used once.

The object of the game is to make a line – horizontally, vertically or diagonally – that adds up to 15. The line can consist of both odd and even numbers.

39. Number Washing Line

5+ years

1+ players

Need – Rope strung up to be a washing line. (tied between 2 chairs is fine), pegs, cards with numbers to be sorted into order from smallest to largest.

Comparing and sorting numbers.

Use numbers appropriate to the ability level of the players, e.g. 0-9 for younger players or 2, 3 or 4 digit numbers for older players.

The number cards are pegged onto the line. Players take turns to sort and peg the numbers into order – the smallest to the largest.

Variation

Decimal Washing Line

Played as above but use decimal numbers to sort into order.

40. Odds and Evens

5+ years

2-4+ players or teams

Need – Cards with the words odd and even written on them.

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Develops the concepts of odd and even.

Each player or team writes down a number (specify the number of digits to be used, i.e. a single digit number, a 2 digit number, a 3 digit number etc.

Players then draw an odd or even card. If the card matches their number, e.g. odd and 27, the player or team score a point. Repeat.

HINT – Before each round, the possible range for the number could be specified, e.g. It must be a number between 30 and 50. (or 300 and 350)

41. Patterns - Simple

5+ years

1+ players

Need – variety of objects – blocks, counters, markers, pencils, colored sticks, straws, bottle tops, beads, stones etc.

Patterning is an important skill to develop in math.

Create a pattern with objects and ask children to add the next 2 or 3 objects to continue the pattern. Discuss the pattern and ask children to describe the pattern.

Example of simple pattern – straw, bead, block, straw, bead, block

Example of more advanced pattern – red block, straw, yellow block, straw, red block, straw, yellow block, straw

Also allow children to create a pattern for other children to continue.

42. Patterns - Shapes

5+ years

1+ players

Need – variety of plastic or wooden shapes or paper, pencils and markers.

Patterning is an important skill to develop in math.

Make or draw a pattern of different shapes and ask children to identify the pattern and add the next 2 or 3 shapes.

Examples of simple patterns – # # O # # O ,



...



Examples of advanced patterns –

Also allow children to create a pattern for other children to continue.

43. Patterns - Numbers

7+ years

1+ players

Need – paper, pencils, markers.

Patterning is an important skill to develop in math.

Write a number pattern and ask children to identify the pattern and add the next 2 or 3 numbers.

Example of simple pattern – **3, 6, 9, 12,** (add 3)

Example of more advanced pattern – **2, 4, 8, 16,** (double each number)

Patterns can also be made where there are 2 steps to creating the next number.

Example – **2, 3, 5, 9, 17,** (double the number and take off 1)

Numbers can also be left out of a pattern for children to fill in the missing number.

Examples – **4, __, 12, 16, 20.** **49, 44, 39, __, 29, 24.**

Also allow children to create a pattern for other children to continue.

A variety of number patterns are given below.

20, 24, 28, 32, ____.

20, 17, __, 11, 8.

12, 15, 18, __, 24.

100, 88, 76, __, 52.

30, 60, 90, __, 150.

71, 61, 51, __, 31.

80, 40, __, 10, 5.

23, 34, 45, __, 67.

1, 4, 9, 16, ____.

$\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, ____.

364, 356, 348, ____.

25, 24, 22, 19, 15, ____.

0.1, 0.2, 0.4, 0.8, ____.

1, 3, 6, 10, ____.

88, 78, 69, 61, 54, ____.

44. Percentage Prizes

10+ years

2+ players or teams

Need – 2 sets of cards one with percentages and one with money amounts, See BLM 5 and 6 for simple sets, calculator if desired

Develops the concept of percentages and provides practice at working out percentages.

Turn cards face down. Each player or team selects one Percentage Card and one Money Card.

Players then work out the amount that they have (using a calculator if desired), e.g. 20% of \$80 is **\$16**.

The player or team with the most is the winner of the round.

Scoring can be done in 2 ways.

- The winner can score a point.
- Or each player or team can record the amount for that round and total their amounts at the end of the game.

FOR THE CLASSROOM – I use this game as a game show. Every student participates in one round. Winner of each round goes into the final. Winner of the final wins a prize. Can be played in one day or held over a week with one round each day. (See also – ‘Fraction Fun’ for a similar game show.)

45. Pirates

8+ years

2 players

Need – pencil, paper (squared paper if possible)

A chance to search for buried treasure and practice grid coordinates!

Similar to **Battleships**.

Use squared paper if available. Each player needs 2 grids that are 10 squares X 10 squares. Label A-J along the bottom and 1-10 down the left side.

Each player marks 2 treasure chests on one of their grids. A treasure chest is 3 squares X 3 squares. (Draw the outline.)

The players then put their treasure into the treasure chests. Each player has

- 4 pearls (put P in 4 squares)
- 3 rubies (put R in 3 squares)
- 2 emeralds (put E in 2 squares)
- 1 diamond (put D in 1 square)

All treasure must be inside a treasure chest. Spread the treasure out over the 2 treasure chests.

Players take turns to try to find the opponent's treasure by calling out a grid coordinate, e.g. H4. Keep a record of what is called on the empty grid.

The other player tells if it is a miss or a find. If it is a find he must tell the type of treasure.

Players put a **X** on their own treasure when it is found. Players mark their finds of the opponent's treasure with the correct letter to show the type of treasure.

Misses can be marked with a 'O'.

First person to find all of the opponent's treasure is the winner.

46. Pizza Plates

8+ years

2+ players

Need – paper plates cut into halves, thirds, quarters, sixths and eighths.

The fraction name of each piece can be written on the pieces if desired.

(The number of plates needed will depend upon the number of players.)

Fraction cards from Black Line Master 11.

Fun way to develop the concept of fractions!

Cards are placed face down in a pile.

Players take turns to pick a card and then take a piece of paper plate that is the fraction shown on the card. The card is returned to the bottom of the pile each time.

As players collect plate pieces (pizza pieces) they have to attempt to put them together to make 2 plates (pizzas).

The winner is the first person to make 2 pizzas. (No overlapping pieces allowed.)

47. Round Off Bingo

8+ years

2+ players

Need – Bingo Cards on Black Line Master 9 or children make their own by writing 6 10's numbers from 10 -100, e.g. markers.

20	30	50	70	80	90
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Practices rounding off to the nearest 10!

The caller calls numbers between 0 and 100 and keeps a record of what is called. Players round off the number called to the nearest 10 and put a marker on the number or cross that number off on their Bingo Card if they have it.

The first player to cover or cross off all of his numbers and call 'Bingo' is the winner. Caller checks that winner has been accurate.

Variation

Round Off Bingo 100's

8+ years

2+ players

Need – Bingo Cards on Black Line Master 10 or children make their own by writing 6 100's numbers from 100 -1000, e.g. markers.

100	300	400	700	800	900
-----	-----	-----	-----	-----	-----

Practices rounding off to the nearest 100!

Played as above but the caller calls numbers between 0 and 1000 and keeps a record of what is called. Players round off to the nearest 100.

48. Round the World

7+ years

6+ players

Fun number fact practice! Ideal for classrooms!

Players sit in a circle. (In the classroom students can remain in their seats.)

A player attempts to move all the way around the circle (or classroom) without having to sit down.

One player stands behind another player.

The caller says a fact, e.g. 3×4 .

The first player of the pair to say the correct answer then stands behind the next player while the other one sits.

Play for as long as time allows or see if a student can move Around the World (around the circle or around the classroom).

Use this game to practice addition, subtraction, multiplication or division facts.

49. Scan and Grab

6+ years

2 players or 2 teams

Need – cards with the answers to the facts you are studying

Great for practicing addition, multiplication and division facts!

Answer cards are placed in the centre for players to see.

The caller calls out a fact and both players or one player from each team scan the answers and try to be the first to grab the card with the correct answer.

The first player to grab the card gets to keep it.

The game ends when only 1 card remains.

The winner can be the player or team with the most cards or the value of the cards can be added up so the winner is the player or team with the highest score.

50. Secret Strategy

8+ years

A secret strategy to help with 9 times tables up to 9x9!

Hold up 10 fingers in front of you.

Whatever number you are multiplying by **9** is the finger that you fold down, e.g.

9x4 – fold down the **4th** finger. The answer is given by the number of fingers before and after the folded finger, i.e. **3** before and **6** after – **36**.

(Only works for 9 times tables.)

51. Show It

8+ years

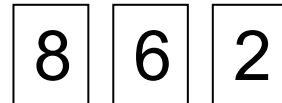
2+ players or 2+ teams

Need – 1 set of number cards for each player or team (see BLM 1)

Great for practicing 3 digit numbers!

Each player spreads out the number cards in front of him.

The caller calls out a 3 digit number. Players quickly arrange the cards to form the number called. A point is scored if the number is formed correctly and the first player to make the number scores an extra point.



If playing with **teams**, each member of the team has 1 or 2 cards. When the caller calls the number, the team members with the cards required to make the number, quickly stand and form themselves into the correct order to make the number (holding the cards up in front of themselves). Each correct number scores a point. First team ready scores an extra point.

Variation

Show It 1000's, 10 000's or 100 000's

Same as above but the caller calls numbers with 4, 5 or 6 digits.

52. Stretch Race

8+ years

2+ players

Need – paper and pencils or markers

Helps to develop place value concepts!

Children are given a number that they have to expand (or stretch). Use a 3, 4, 5 or 6 digit number depending upon the ability of the children.

Show or say the number. On 'GO' children race to be the first to write the expanded number, e.g. **387 – 300+80+7**

53. Take Off

7+ years

2+ players

Great way to practice subtraction!

Before starting decide upon a start number, e.g. 20, 50 or 100. Players take turns to subtract any number from 1-9. The player who gets to 0 is the winner.

- E.g.
- 1st player $20-3=17$
 - 2nd player $17-4=13$
 - 1st player $13-3=10$
 - 2nd player $10-2=8$
 - 1st player $8-8=0$ Winner

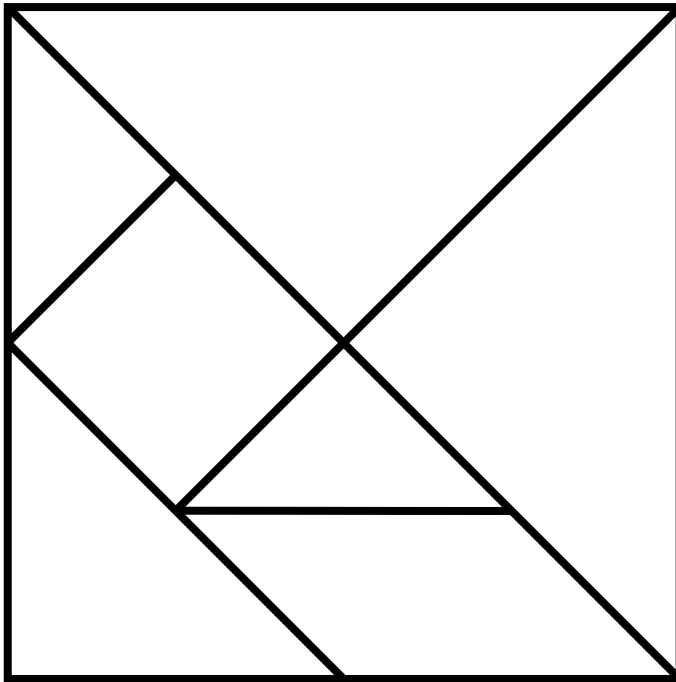
The older the child, the higher the start number can be.

54. Tangram Tangles

7+ years

2 players

Need – 2 tangrams (some stores sell them in wood or plastic) or print the following twice.



A tangram is an ancient Chinese puzzle!

Use the tangram to make lots of interesting shapes.

Given all of the pieces, can you put them back together to make the square?

Can you make a triangle using all of the pieces?

Can you make a rectangle using all of the pieces?

Put the pieces together to make an animal shape.

Tangram Tangles

Players sit back to back.

Each player has the 7 tangram pieces in front of them.

Players take it in turns to make a design with the pieces and then describe to the other player how to put the pieces together to make the same design.

HINT - Before starting, decide whether the players can ask questions or not, and what kind of questions can be asked - only yes/no questions or any questions.

55. Time Bingo

7+ years

2+ players

Need – toy clock face or draw clock on a black board

Fun way to practice reading the time! Great for classrooms!

Each child makes their own bingo card by recording 6 times in digital form.

Specify the range of times allowed. Range will depend on ability level of the children. E.g. - only o'clock or half past

- only quarter to and quarter past times
- only times ending with 5 or 0 between 2:00 and 4:00

Bingo card might look like this -

The adult now shows times on the toy clock and the children cross off the times on their cards as they are shown.

First child to cross off all of the times on his card and call 'Bingo' is the winner.

2:15
3:25
2:05
2:55
3:20
3:00

56. Toothpick Grab

5+ years

2+ players

Need – toothpicks in a bowl

Develops number concepts!

Players take turns to grab as close as possible to 10 (or 20) toothpicks.

Count the number grabbed. The player with the closest to 10 can score a point or players score a point for grabbing exactly the right number.

57. Twenty Questions Number Game

Great for classrooms!

7+ years

2+ players

IT selects a number within the range to be played, e.g. 1- 20, 1-100, 100-1000.

The number is written on a piece of paper but not shown to the others.

The other players then ask questions to help them to identify the number.

Only yes/no questions can be asked.

HINT – Encourage children to ask general questions to begin with, e.g. Is it odd?

Is it higher than 50? instead of guessing the number, e.g. Is it 38?

58. Vanishing Numbers

7+ years

2 players

Need - calculator

Great game for practicing place value!

1st player enters a number into a calculator. (Specify how many digits it should have, 3, 4, 5, 6 or 7.)

2nd player tells which digit is to vanish, i.e. change to a zero.

1st player then enters one operation into the calculator to change it to a 0.

One point is scored if she is successful.

1st player then nominates to the 2nd player which digit he is to make disappear.

Take turns entering a new number when necessary.

e.g. 1st player might enter 457.

2nd player might say make the 5 vanish. (1st player then enters '- 50 =' to turn the 5 into a 0.

1st player then says make the 4 vanish (2nd player has to enter '- 400 =')

59. What's My Number?

6+ years 1+ players

Great for all ages and levels of ability!

An adult or child selects a number within the specified range and writes it on a piece of paper. Clues are then given for others to guess the number.

If children are to give the clues encourage them to use mathematical terms within their vocabulary, e.g. odd, even, digits, larger than, smaller than, prime, composite, multiples, divisible by.

What's My Number? I am odd. I am larger than 10 and smaller than 20. One of my digits is a 5.	What's My Number? I have 2 digits. One is an odd number and one is and even number. The sum of my digits is 6. I am divisible by 5.	What's My Number? I am larger than 50 and less than 60. I am even. I am divisible by 3.	What's My Number? I have 2 digits. I am less than 30. I am prime. One of my digits is a 7.
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60. What's My Shape?

6+ years

2 teams

Need – Cards with shapes on them See - BLM 7 and 8 Shape Cards – Select cards appropriate for children's ability

Revises geometric shapes!

One team has a turn then the other team has a turn.

Cards are placed in a pile face down.

The first player in the team takes a card and looks at it. This player then describes the shape without naming it, e.g. It has four sides and all of them are equal.

The team has to guess the shape. When the team guesses the correct shape the next player takes a card and describes the shape.

The team is given a time limit, 1-2 minutes and scores 1 point for every correct shape that they name.

Cards are shuffled and the next team has their turn.

The winning team is the team with the most points.

61. Who Am I?

7+ years

6+ players

Need- a card with a number on it for each child, pins

An interesting but noisy game!

Each player has one number pinned to their back that they haven't seen.

On 'GO' children walk around and ask questions of others to help them to identify their number.

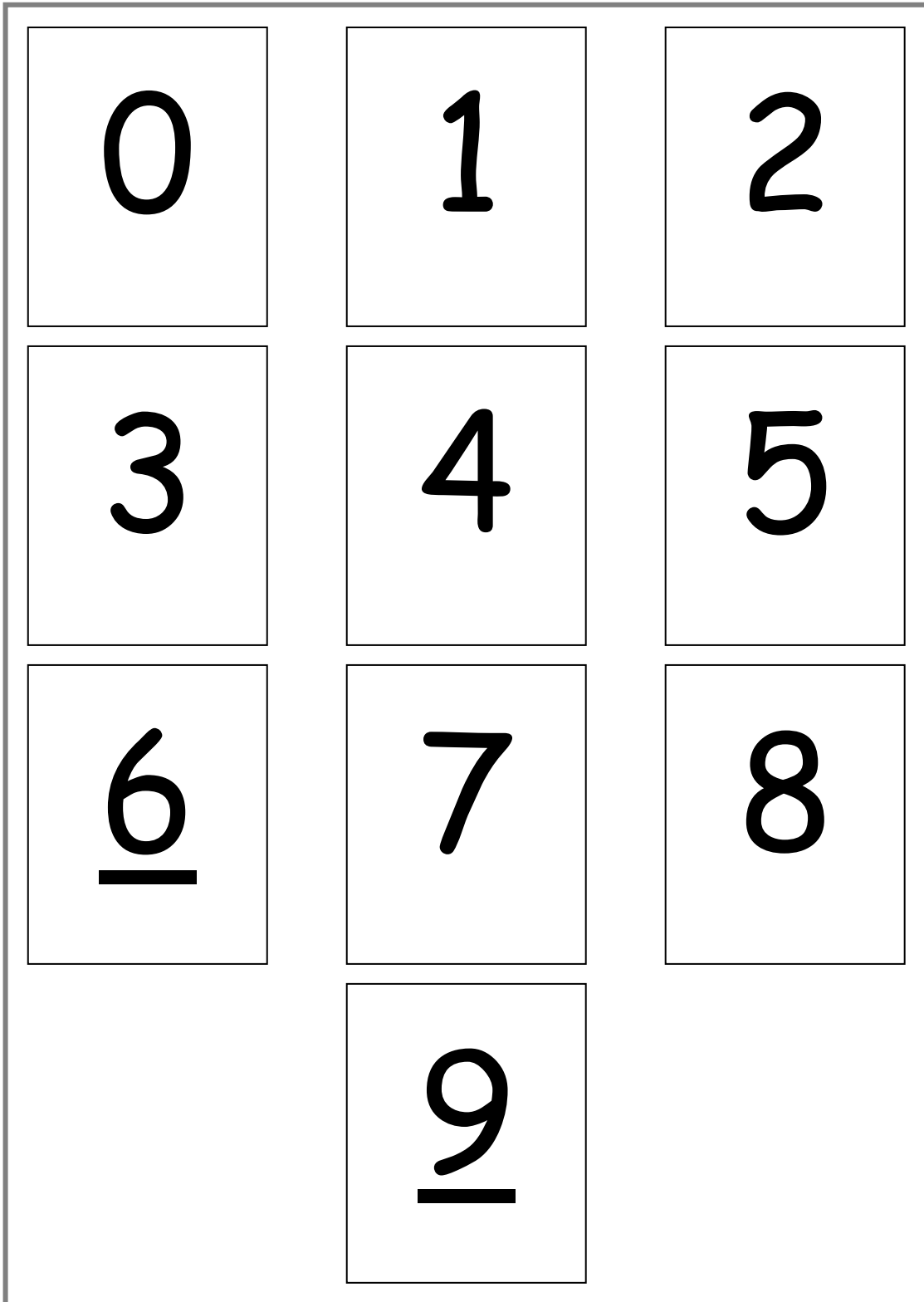
Rules

- Only Yes/No questions can be asked.
- Children can only ask one question of a person and must then move to another person. They can ask a question of the same person after visiting others to ask questions.

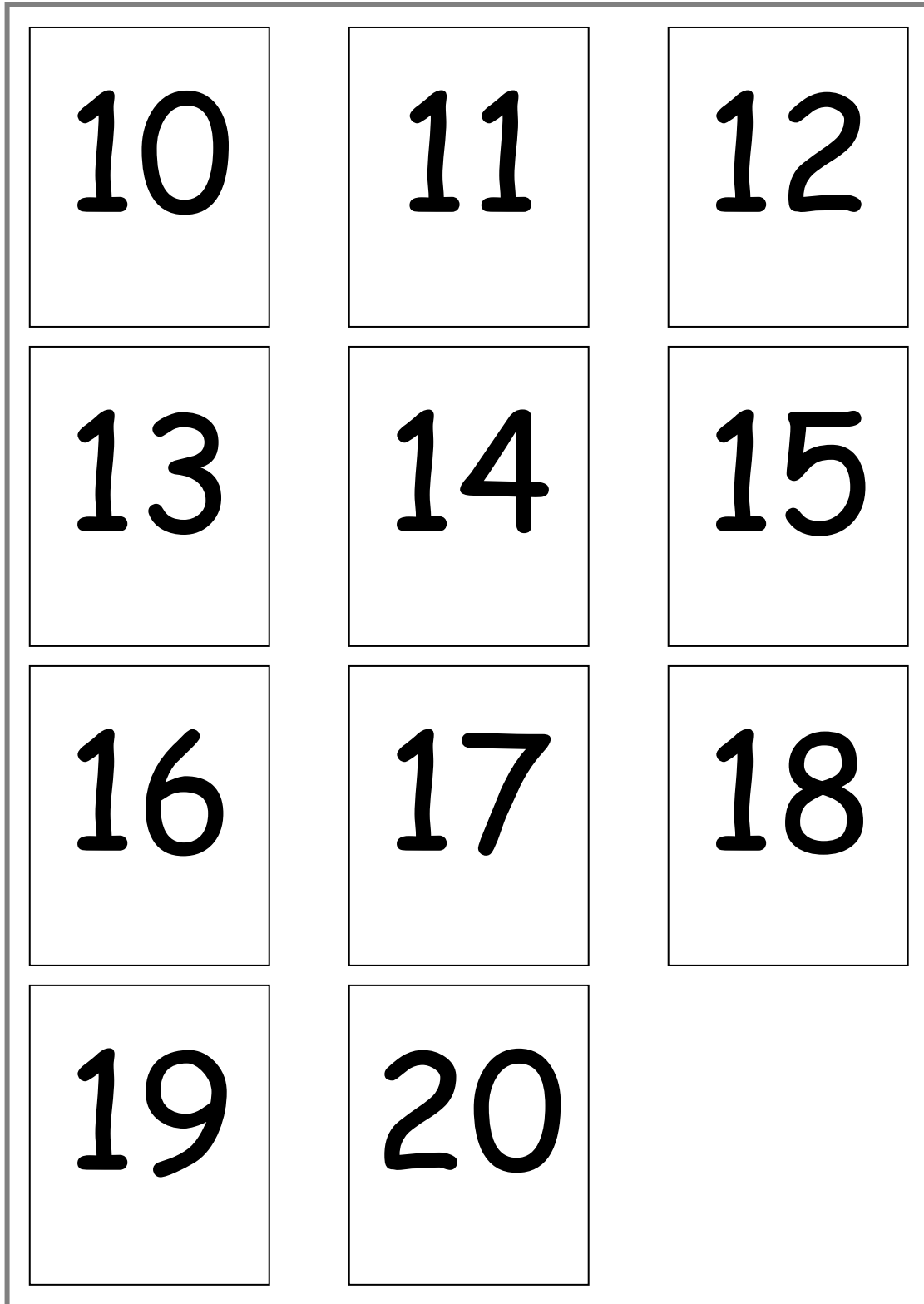
First player to identify her number is the winner.

Play can continue until each child has identified his/her number.

Black Line Master 1
Cut out cards to make Number Cards.



Black Line Master 2
Cut out cards to make Number Cards.



Black Line Master 3
Cut out cards to make Fraction Cards for "Fraction Fun".

$$\frac{1}{2}$$

$$\frac{1}{4}$$

$$\frac{1}{8}$$

$$\frac{2}{4}$$

$$\frac{3}{4}$$

$$\frac{3}{8}$$

$$\frac{4}{8}$$

$$\frac{5}{8}$$

$$\frac{6}{8}$$

$$\frac{7}{8}$$

Black Line Master 4
Cut out cards to make Number Cards for "Fraction Fun".

8

16

24

32

40

48

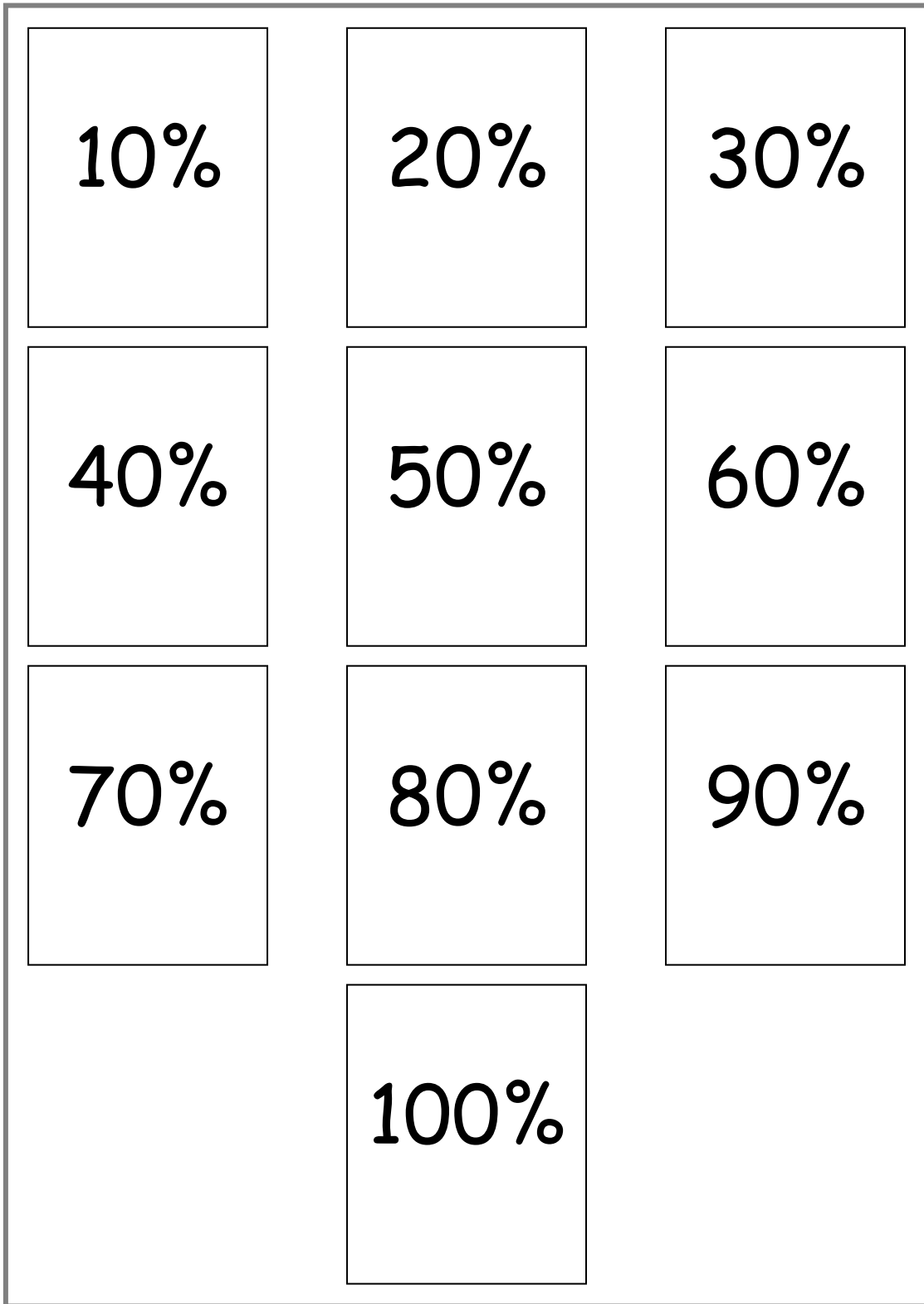
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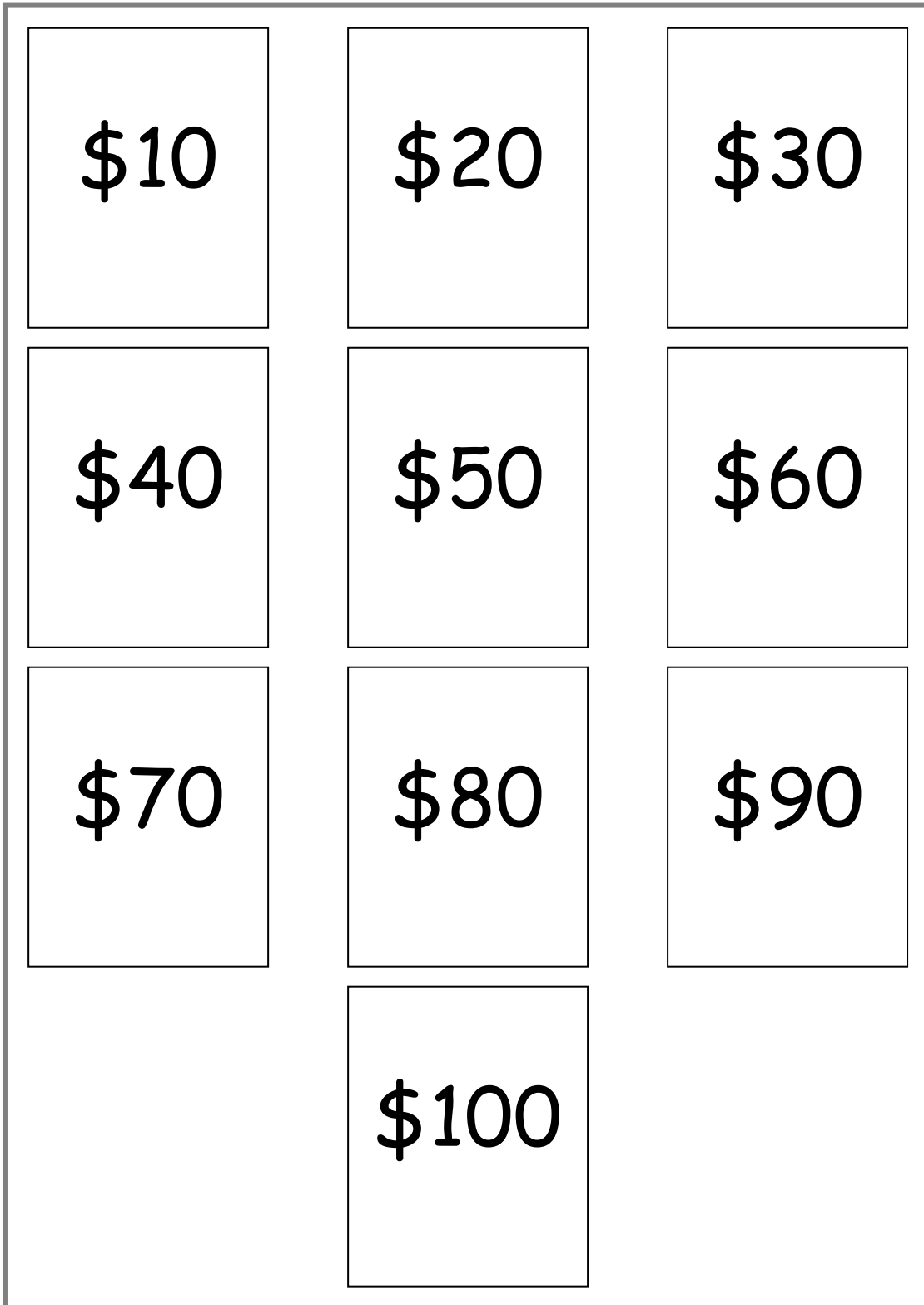
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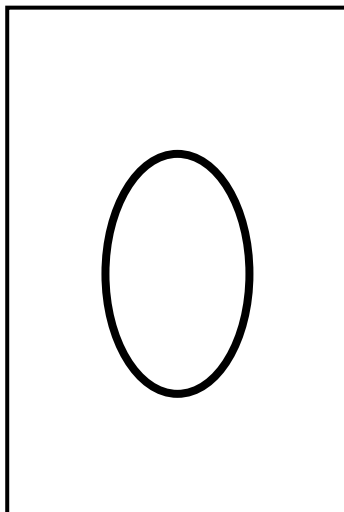
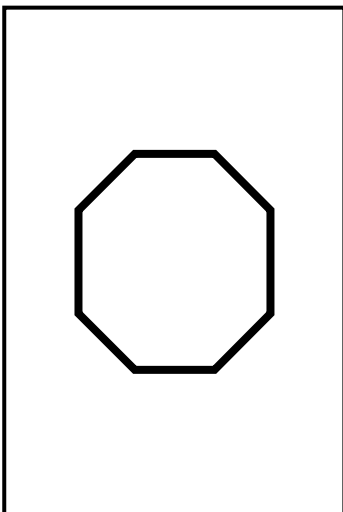
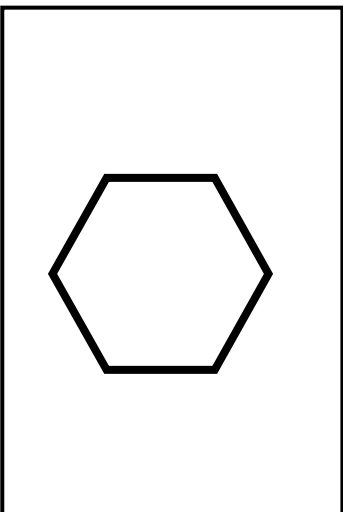
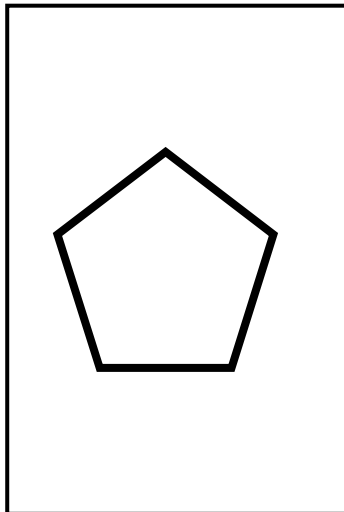
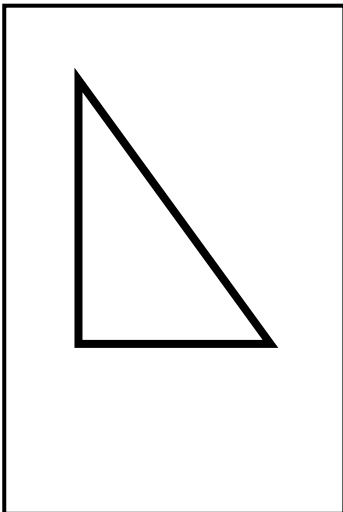
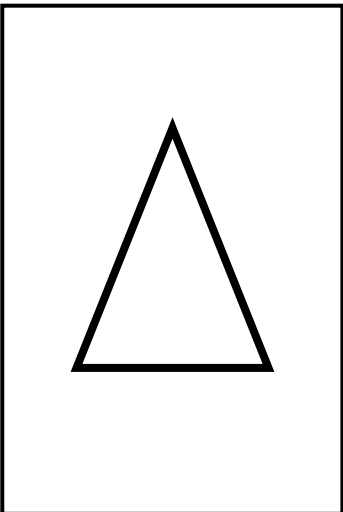
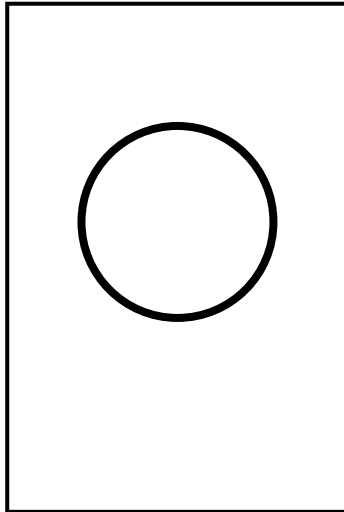
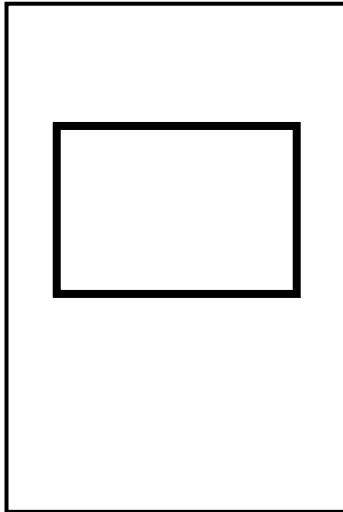
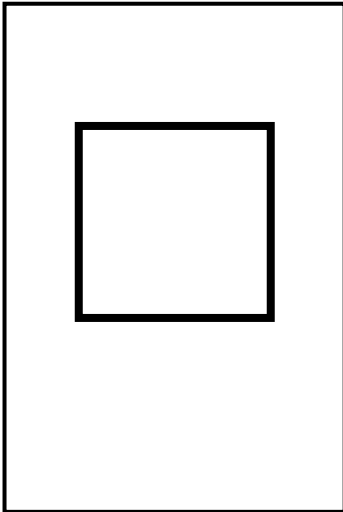
Black Line Master 5
Cut out cards to make Percentage Cards for “Percentage Prizes”.



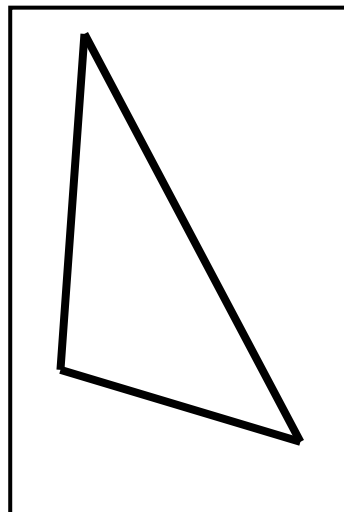
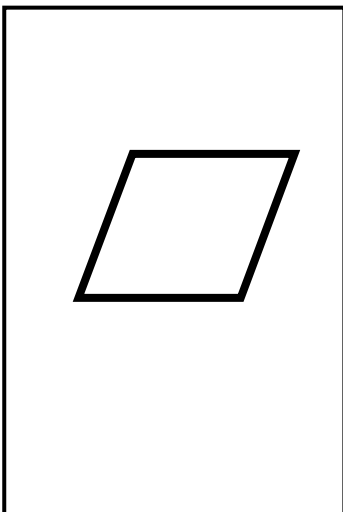
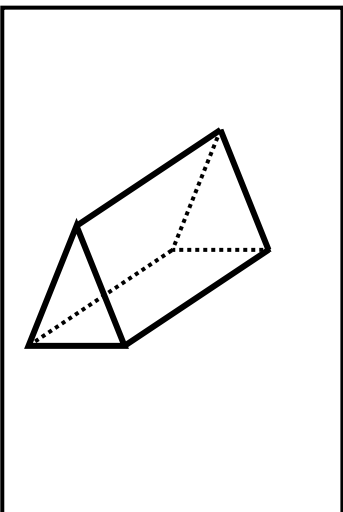
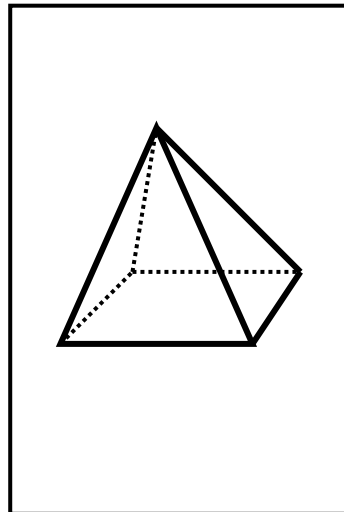
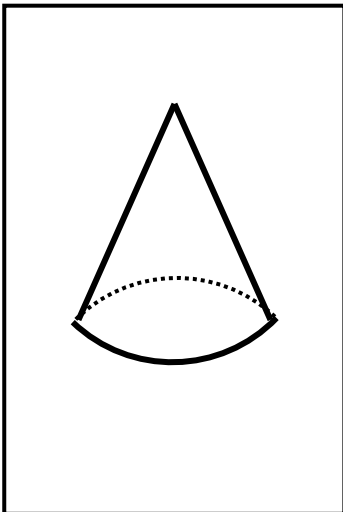
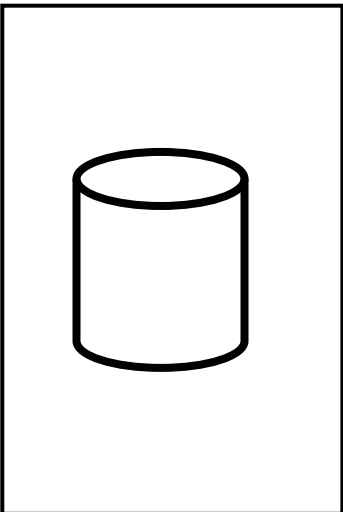
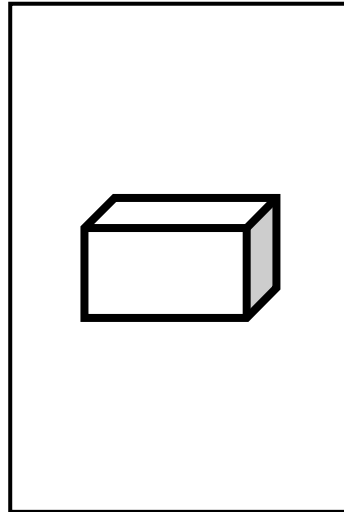
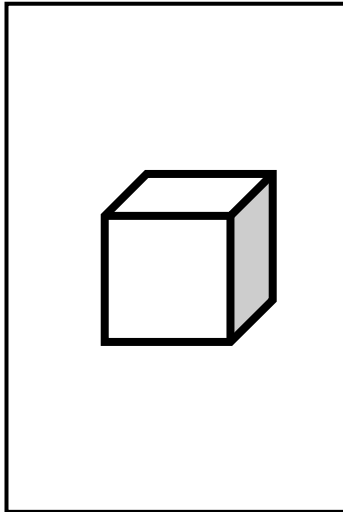
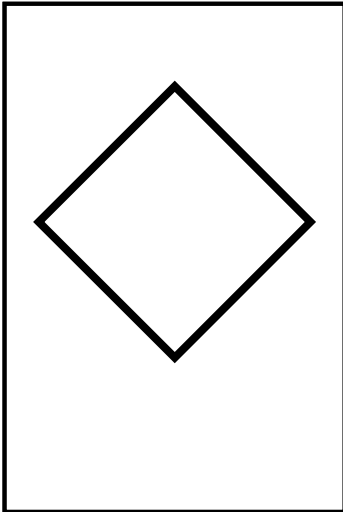
Black Line Master 6
Cut out cards to make Money Cards for "Percentage Prizes".



Black Line Master 7
Cut out cards for 'What's My Shape?'



Black Line Master 8
Cut out cards for 'What's My Shape?'



Black Line Master 9
Cut out cards for 'Round Off Bingo'.

30	40	60	70	80	90
----	----	----	----	----	----

10	20	30	50	80	100
----	----	----	----	----	-----

20	30	50	70	90	100
----	----	----	----	----	-----

40	50	60	80	90	100
----	----	----	----	----	-----

10	50	60	70	80	90
----	----	----	----	----	----

20	30	40	70	80	90
----	----	----	----	----	----

30	60	70	80	90	100
----	----	----	----	----	-----

20	30	40	50	60	80
----	----	----	----	----	----

Black Line Master 10
Cut out cards for 'Round Off Bingo 100's'.

300	400	600	700	800	900
-----	-----	-----	-----	-----	-----

100	200	500	600	700	900
-----	-----	-----	-----	-----	-----

200	300	500	700	900	1000
-----	-----	-----	-----	-----	------

100	200	300	600	700	800
-----	-----	-----	-----	-----	-----

200	400	600	700	800	1000
-----	-----	-----	-----	-----	------

400	500	600	700	800	900
-----	-----	-----	-----	-----	-----

100	200	400	500	900	1000
-----	-----	-----	-----	-----	------

200	300	500	600	800	900
-----	-----	-----	-----	-----	-----

Black Line Master 11
Cut out cards for 'Pizza Plates'.

$$\frac{1}{2}$$

$$\frac{1}{3}$$

$$\frac{1}{4}$$

$$\frac{1}{6}$$

$$\frac{1}{8}$$

$$\frac{1}{2}$$

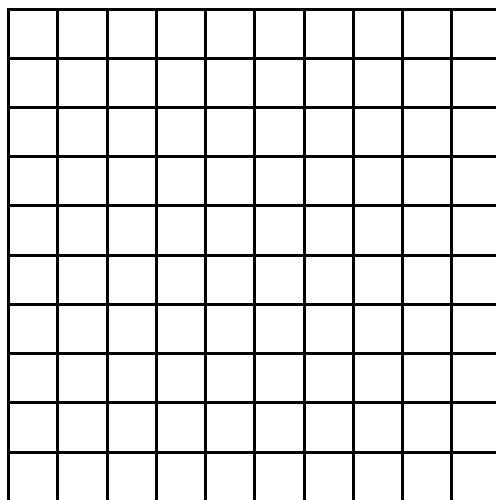
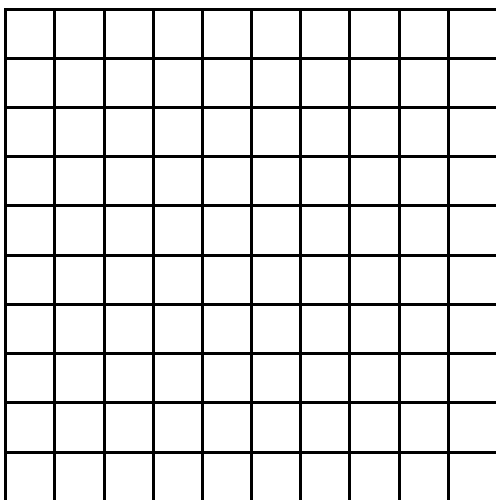
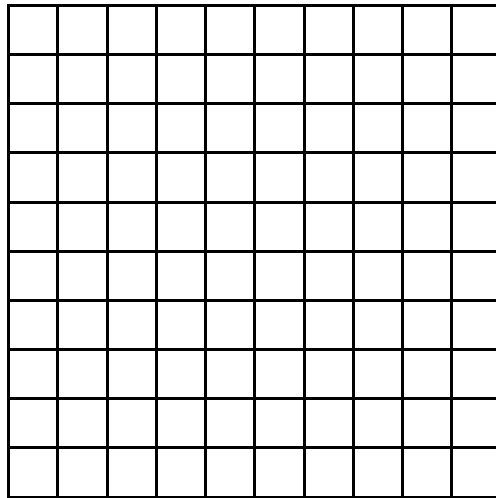
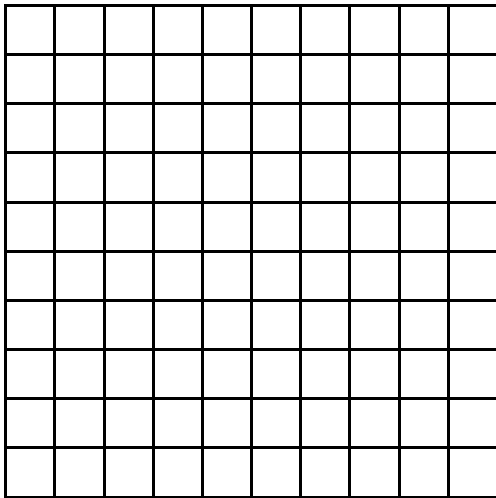
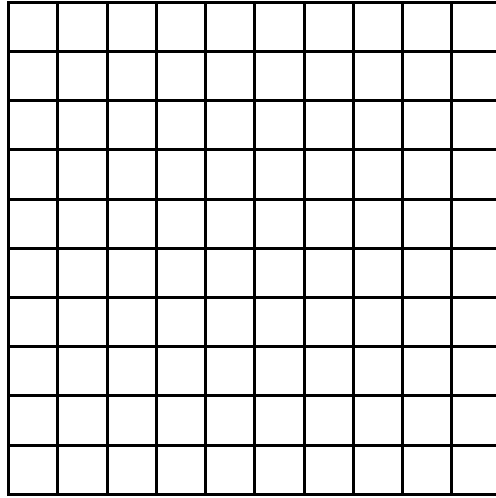
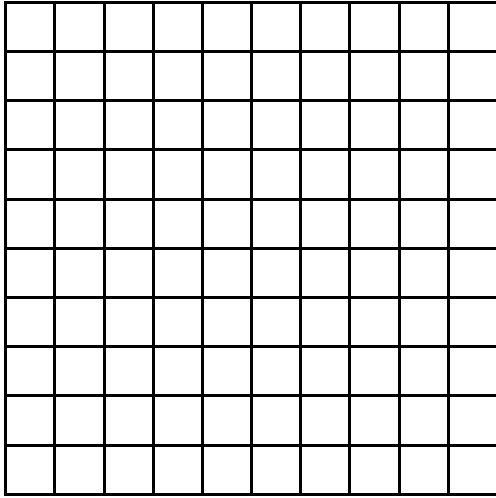
$$\frac{1}{3}$$

$$\frac{1}{4}$$

$$\frac{1}{6}$$

$$\frac{1}{8}$$

Black Line Master 12
Cut out grids for 'Build One'.



Black Line Master 13
Cut out decimal number cards for 'Build One'.

0.3	0.03	0.35
0.1	0.15	0.01
0.2	0.25	0.22
0.02	0.05	0.04
0.4	0.14	0.26