In Between

Purpose

Children will learn what number or numbers are *between* two numbers.

Materials

A pack of playing cards with the picture cards removed.

Organisation

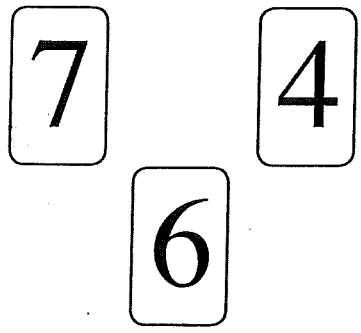
Three or more players.

Aim

To win the most cards.

Rules

1. One player takes on the role of 'flipper' and deals the other two players three cards each.
2. The dealer keeps the rest of the pack.
3. The dealer flips over two cards from the pack. For example, 7 and 4.



4. The other players race to throw out a single card that is in between the two cards that the dealer turned over.
5. The first player to throw out a card that is between the two cards, wins all of the cards and places them to one side.
6. If no one can play, the two cards are returned to the bottom of the pack. Then another two cards are turned over.
7. If the dealer turns over two of the same card, or consecutive cards, they remain in the centre and a third card is turned over. Players may then use any two cards as the comparison cards.
8. The player with the most cards at the end of the game is the winner. The game ends when the pack is exhausted.

Variations

1. The dealer turns over two cards and then turns over two more cards. The total for each pair of cards is calculated and the players have to find a pair of cards from their hand that add to a total between each pair of cards.
2. Play in-between fractions. Four cards are turned over and two common fractions (where the numerator is smaller than the denominator) are formed. Players race to create a fraction that is between the two fractions.

E

N

Flip: Greatest Number =

Purpose

Children will learn to compare numbers.

Materials

A pack of playing cards with the picture cards removed. Ace = 1.

Organisation

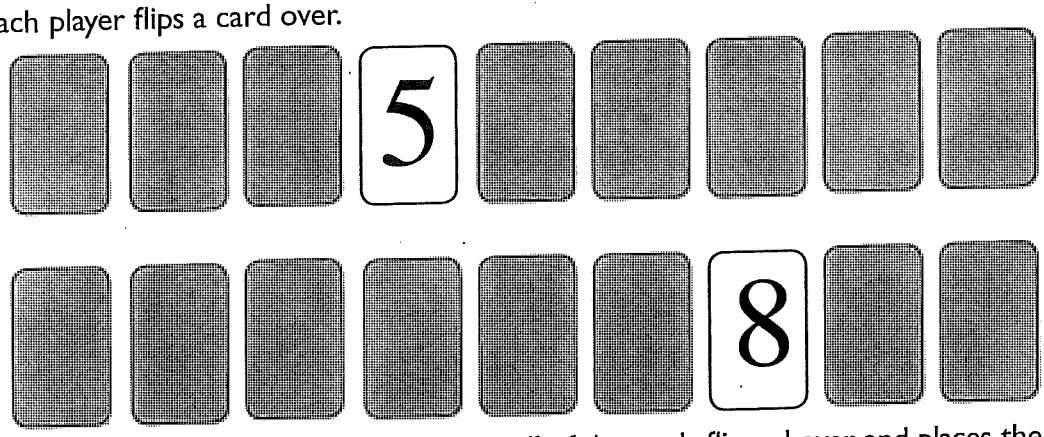
Two or more players.

Aim

To be the first player to run out of cards.

Rules

1. Each player is dealt an equal number of cards (eg 9). (Any spare cards are left to one side.)
2. The cards are placed face down in front of each player. (Players must not see their cards.)
3. Each player flips a card over.



4. The player with the greatest number wins all of the cards flipped over and places them in a separate pile.
5. In the case of a tie (where two cards are the same value), the cards are left in the centre and jackpot to the next round.
6. Play continues until one player runs out of cards.
7. The player with the most cards at the end is declared the winner.

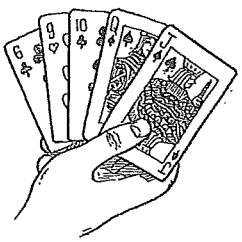
Variations

1. The winner is determined by adding the values on all of the cards that have been won.
2. The picture cards may be added back into the pack. The Jack represents 11, the Queen, 12 and the King 13.
3. Use some blank cards to create a set of cards that involve larger numbers, eg teen numbers, two-digit numbers.

E

N + –

This Goes With That



Purpose

Children will look for pairs of cards that add to the numerical value of a third card. To establish part-part whole thinking.

Materials

A pack of playing cards, Ace = 1, Jack = 11, Queen = 12 and King = 13

Organisation

Two or more players.

Aim

To make as many linked triples as possible. A set of three cards such as a 4, 5 and 9 forms a triple.

Rules

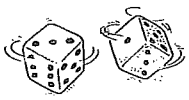
1. Each player is dealt six cards.
2. The remainder of the pack is placed face-down in the middle of the table.
3. The first player picks up a card from the top of the pack in the middle of the table and checks their other cards to see if any three cards go together. If three cards may be linked then they may be laid down in front of that player. When laying the cards down the player must state all of the ways the cards are linked. For example, with 5, 4 and 9 the player would state:

- 5 and 4 make 9.
- 4 and 5 make 9 (an example of the commutative property of addition).
- 9 take 4 is 5.
- 9 take 5 is 4.

4. A player may only place one set of three cards down per turn.
5. The player must then discard one card from his/her hand.
6. The next player may either pick that card up from the discard pile or pick a card up from the pack. If a set of three cards can be laid down, the player can do so, however, if they can't, the player discards one card and then next player has a turn.
7. The player who runs out of cards is the winner.
8. Should the pack run out, the discard pack may be turned over and used as the pick-up pile. One card is left facing up in the discard pile.

Variations

1. Deal 9 cards to start the game
2. The game may be changed to multiplication and division by creating sets of linked tables card, eg 7, 8 and 56.



Make to Ten

Purpose

Children will practise mentally calculating pairs of numbers that add to ten, multiples of ten and one hundred.

Materials

One six-faced dot dice per group of players. One game board per group.

Organisation

Two – four players.

Aim

To correctly answer the most combinations to ten or multiples of ten.

Rules

- Players take turns to roll the dot dice and record either the numeral or the dots in the left column.
- The player writes down the number that is required to make ten in the right hand column.
- Play continues for ten rounds.
- Players mark the combinations that are correct. The children may require a combinations chart; 1 + 9, 2 + 8, 3 + 7, 4 + 6 and 5 + 5 to help. Ten frames could be provided for support. For each combination that is correct, the numbers in the right hand column are added and the player with the largest total wins. [This provides the opportunity for players to practise adding a string of numbers.]

Make to Ten

3	7
1	

Variation: Make to Thirty

1 3	1 7
1 6	

Encourage players to explain how they made 30.

Variations

- Change the dice from dot dice to:

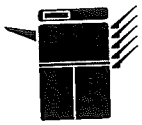
  six-faced numeral dice

  four-faced dice

  ten-faced (0 – 9) dice

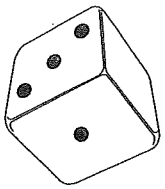
- Play "Make to _____" (a multiple of ten). When playing make to 20 or 30 use a twenty-faced dice.

Make to Ten Board



Name _____ Name _____ Name _____ Name _____

Knockout Nine



x2

Purpose

- Understand and use the language of chance.
- Identify all possible ways to cross off numbers
  1 - 9 using two dice.
- Use a strategy to give you a greater chance of winning.

Materials

Two six-faced dice.

Organisation

Two – four players.

Aim

To be the player with the *smallest* total.

Rules

- Each player writes the numbers 1 to 9 on a piece of paper.
- The first player then rolls the two dice. The player may cross out the numbers shown on the dice or the sum of the two numbers.
  For example, if a 4 and 2 show, then the player may cross out the 2 and 4 or 6 (4 + 2).
- When six numbers or less are left only a single dice is used. The player's turn continues until the player cannot cross off any more numbers.
- The remaining numbers are totalled and this is the score for that round.
- After five rounds the player with the smallest total is the winner.

Teacher notes

This game may appear deceptively simple. Even though the numbers are small, strategy plays a part in ensuring that scores are minimised.
For example, it makes sense to cross out larger numbers early because later in the game a player may only use a single dice and therefore 7, 8 and 9 cannot be crossed out.

- Students could be asked to look at each number and record the number of ways it could be knocked out using the two dice.
  E.G. 9 – 4 and 5, 6 and 3.
- You could use this game to explore the concept of chance.
  Focus Questions:
  - *Which numbers have the greatest or least chance of being crossed out? Why?*
  - *Which numbers would you cross out first? Why?*
  - *Which numbers would you leave until last?*

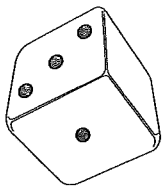
Encourage students to experiment with different strategies that will give them a greater chance of winning.

Variations

- Allow students to vary numbers in the list and include two of the same number.
- Play with two ten-sided dice. Select appropriate numbers that could be crossed off.

1 2 3 4 5 6 7 8 9

Climb The Ladder



x1

Purpose

- Represent dots shown on dice as cubes shown on the ladder.
- Use materials to show part – part whole nature of numbers .
  4 + 6 = 10, 5 + 3 + 2 = 10.
- Use mental strategies to make 10.
- Know basic facts to ten.

Materials

A single six-faced dot dice.
A Climb the Ladder board for each player.

Organisation

Two players.

Aim

To be the first player to reach the end of the ladder.

Rules

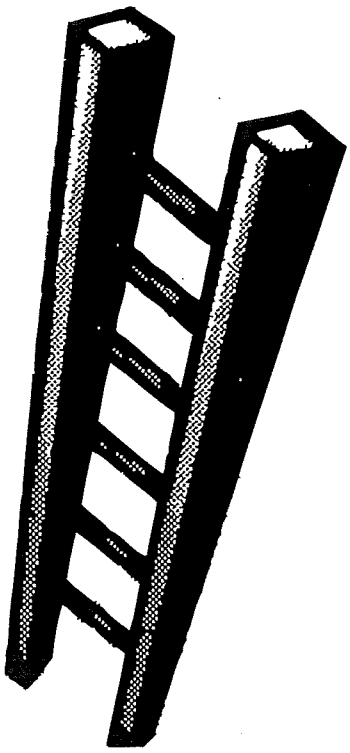
- The first player rolls the dice and colours that number of squares. Alternatively the players could place 1 cm cubes on the squares, or use coloured rods.
- The player who is first to reach the end of the ladder is the winner.

Teacher notes

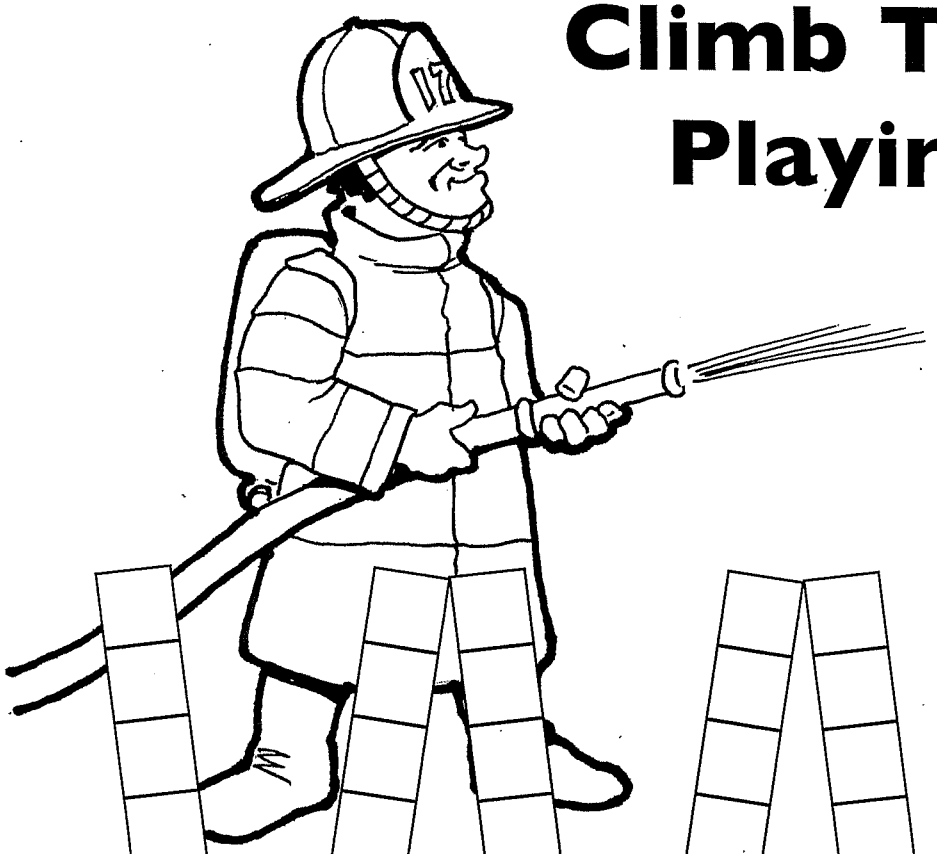
The playing board is designed to focus the children on bridging tens. In order to play, children need to be able to match the number of dots on the die to the number of squares that are coloured (or the number of cubes placed on the ladder). You may wish to encourage the children to use two different colours to emphasise the additions that are taking place.
For example, if a 4 and a 3 and a 5 are rolled, students may observe that 7 and 5 is 7 and 3 and 2.

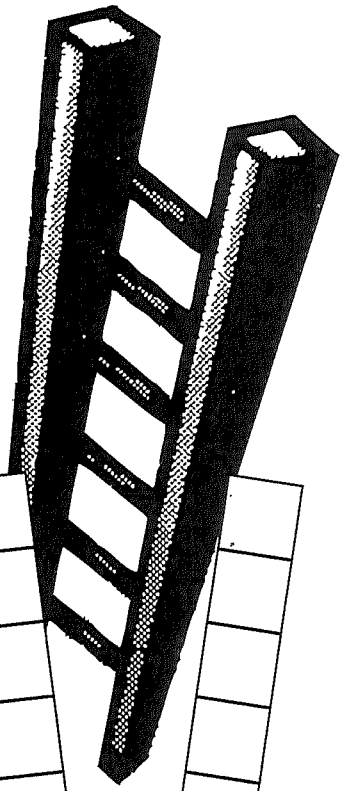
Variations

- Start at the top of the ladder (100) and subtract the amount showing on the dice until reaching the bottom of the ladder.
- Use a numbered six-sided dice rather than a dot dice.
- Change the rules so that a section of the ladder may be completed only if there is an exact match.
  For example, if 7 rungs have been coloured and a 4 is rolled then that section of the ladder can not be completed and a different section of 4 rungs coloured. A roll of 1, 2 or 3 could, however, be added.
- Ask the children to write the numbers next to each section of the ladder indicating the number of squares that are shaded after each roll.
- Ask the children to keep a cumulative total each time rungs are shaded on the ladder.

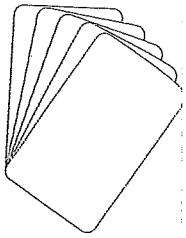


Climb The Ladder Playing Board





Up and Down



Purpose

- Order numbers in ascending or descending order
- Compare numbers 1 – 13
- Instantly recognise the total spots on the cards

Materials

- Deck of cards.
  (Aces = one, Jacks = eleven, Queens = twelve, Kings = thirteen)

Organisation

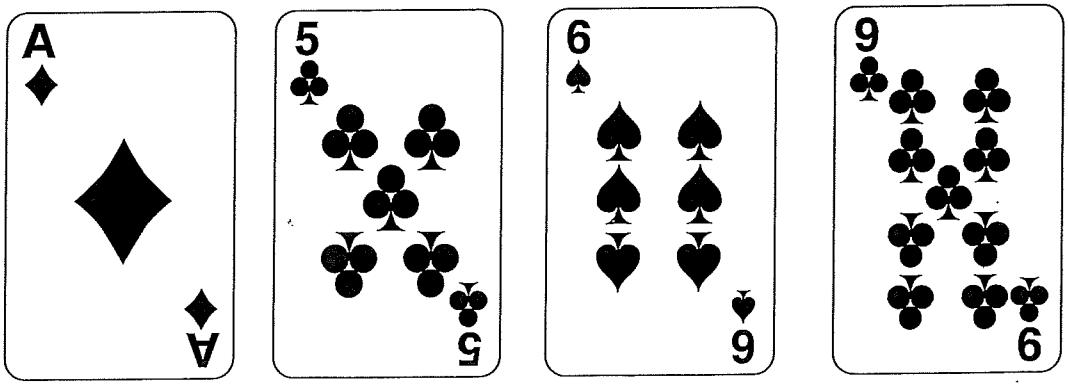
A game for 2 – 4 players.

Aim

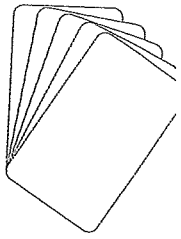
To arrange the cards in order.

Rules

- Each player is dealt four cards face up. The remaining cards are placed in a pack in the centre of the table.
- The aim of the game is to be the first player to arrange the cards in either ascending or descending order. This does not have to be in consecutive order, ie 4,5,6,7. It could be 2, 5, 6 and 9. Cards cannot be rearranged – only exchanged.
- Starting with the player to the dealer's left each player may exchange one of his/her cards for o from the top of the pack or one from the disc pile. The card which is exchanged is placed into discard pile.
- The first player to arrange his/her cards in ord is the winner of that round. The winner receive point. The first player to accumulate five points the winner of the game.



Snap +/- 1



Purpose

- Identify numbers before and after counting numbers 1–10.

Materials

- Deck of cards (picture cards removed).
- Ace may equal one or eleven.

Organisation

A game for two players.

Aim

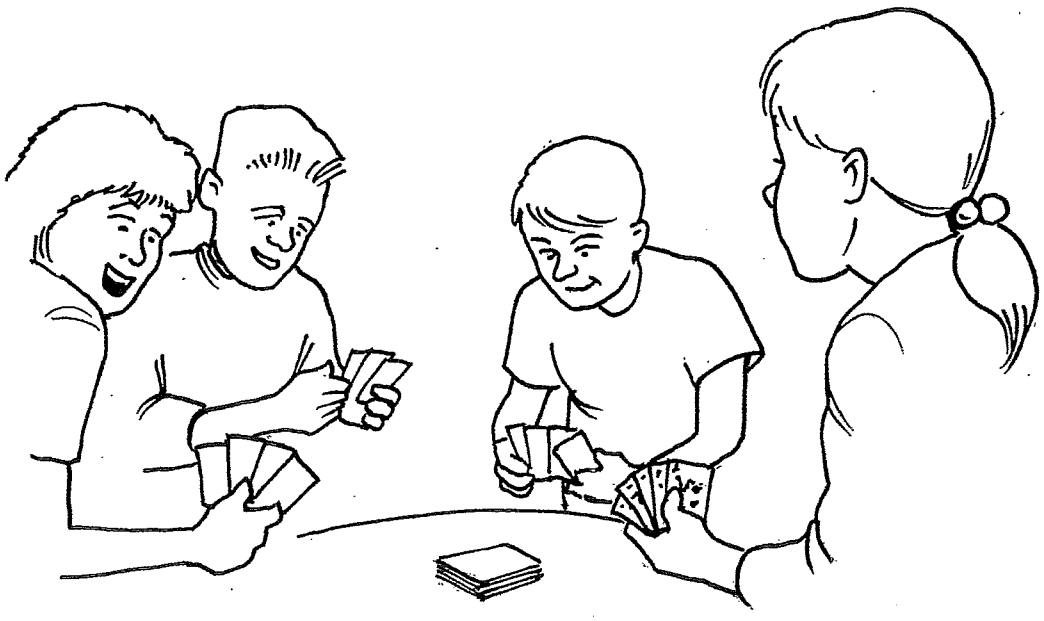
To win cards by slapping the card pile where there is a difference of one.

Rules

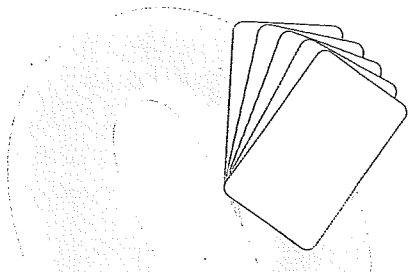
- The game is played along similar lines to 'snap'.
- One player deals all the cards face down to the players.
- Each player turns over their top card. Instead of slapping the pile of cards when the values on the two cards match, the pile of cards should be slapped when the values differ by one. For example if a 7 is placed on the pile and then a is discarded on top a player may slap the pile pick up all the cards.
  If an 8 was on the pile and a 7 was discarded then the pile of cards could also be slapped.
- The winner is the player with the most cards after a set period of time or the player who ends up with all the cards.

Variations

- Play the standard game of snap to develop number recognition.
- Play Snap +/– 2.
  i.e. snap when the values differ by two.



Make 10 Again



Purpose

- Identify two or more cards that total to ten.
- Rearrange numbers to make them easier to add.
- Recall basic addition facts to ten.

Materials

- Deck of playing cards (10s and picture cards removed).
- Ace = one.

Organisation

A game for one or two players.

Aim

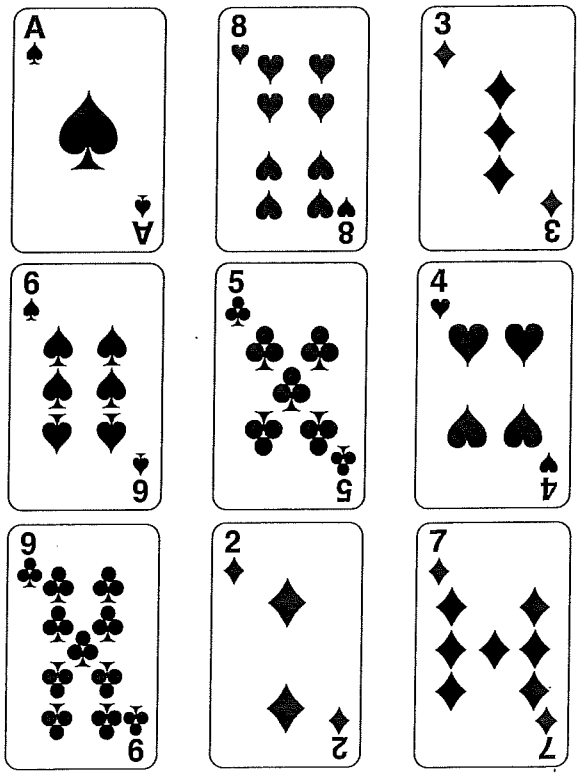
To make combinations that add to 10.

Rules

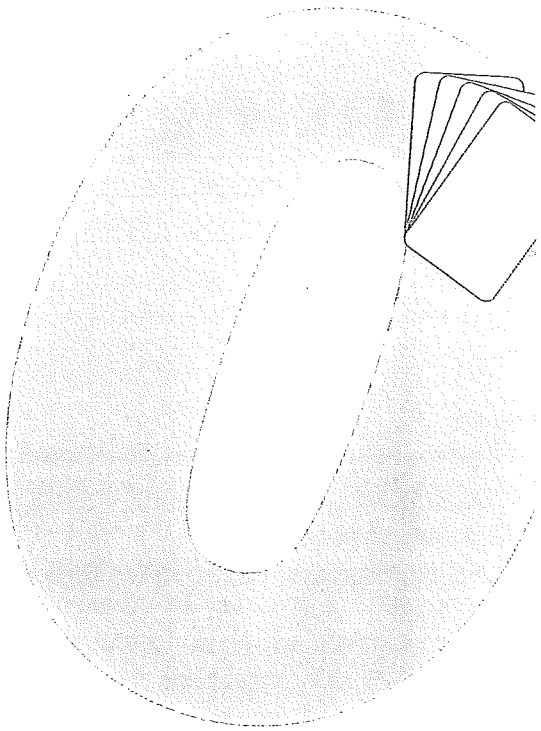
- One player deals all 36 cards, face up in a 3 x 3 array.
- There should be four cards in each pile.
- Players take turns to pick up any number of cards, which when added make 10. As cards are taken from the pile a new card is revealed underneath.
- Play continues until all the cards have been used or until no more combinations that add to ten can be made.
- The winner is the player with most cards at the end of the game.

Variation

- Choose a different target number eg twelve.



Make 10



Purpose

- Identify two or more cards that total to ten.
- Rearrange numbers to make them easier to add.
- Recall basic addition facts to ten.

Materials

- Deck of playing cards (picture cards removed).

Organisation

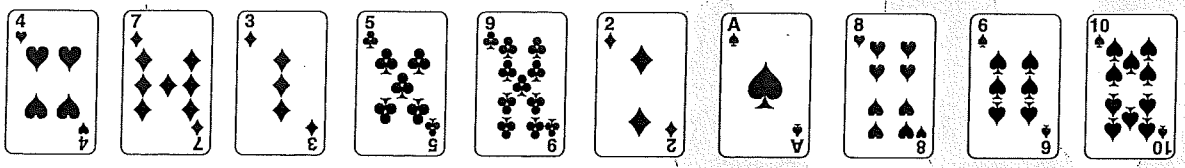
A game for pairs or small groups.

Aim

To make combinations that add to 10.

Rules

- One player deals out ten cards in a row.



- The first player then looks across the row of cards for a combination of cards (any number of cards is fine) that adds to make ten e.g. 6 + 4, 7 + A + 2.

- Only one combination may be removed. The aim of the game is to collect as many cards as possible, so combinations that require more cards are favoured.

- Once a combination of cards has been removed the cards are replaced by the dealer with new ones from the pack.

- Play continues until there are no more cards or until players can no longer make up combinations that add to ten. Players then count their cards to determine the winner.

Variation

- Choose a different target number eg. twelve.