Belmore South

Holiday Maths Pack

Belmore South
Public School

CREATING THE FUTURE
Since 1862

Sustaining strong maths
learning over the summer
holidays!

Dear Belmore South Families,

Research has shown learning can take a downhill slide over the summer holiday period. Children can lose up to 3 months of maths learning in addition, subtraction, multiplication and division if they are not regularly engaging in and practising these skills. This learning loss can often take teachers up to a term to recover within the new school year.

To reduce the risk of summer learning loss occurring, teachers at Belmore South have designed a holiday maths pack consisting of new and familiar card games to play with family and friends over the holiday break. Each family will receive some dice and this activity pack to ensure a strong start to maths learning in 2017.

On behalf of all the teachers at Belmore South we thank you for your ongoing support and partnership in your child's learning.

Happy and safe holidays,

Lurlene Mitchell   Emily Rhodes *(Instructional Leader)*

   Principal   Elza Filacouridis *(Interventionist)*

                                     Kathryn Hionis *(Interventionist)*

Holiday Learning Challenge

Be an active learner over the holidays. Colour in a ball every time you play a dice game or use your maths learning over the holidays. If all the balls are coloured, you will receive a Shine Award on your return to school in 2017.
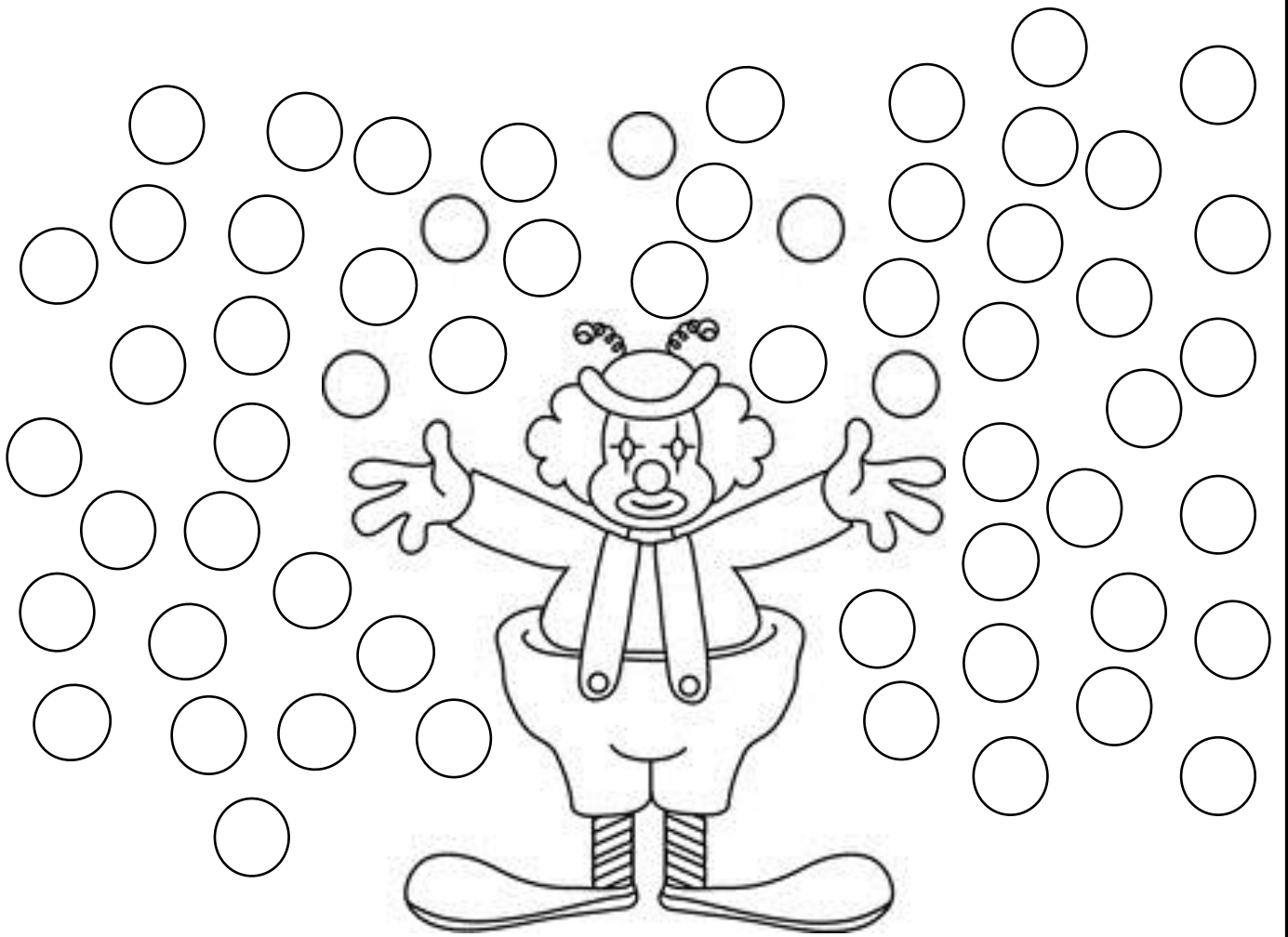
Parent/caregiver signature _____

Return to your classroom teacher Term 1 2017.

"Beat That!"

Materials
Two dice

Organisation
Two or more players

Rules

1. Each player takes a turn rolling the dice and uses the numbers rolled to make the highest number possible.

   For example, if a player rolls a two and a three, they can make 32. A player who rolls a six and four would win the round as they have the higher number, ie. 64.

2. After each roll, a player challenges the next player, to "Beat that!" The player, who makes the highest number, receives a point for winning the round.

3. Continue playing the game in rounds, assigning a winner to each round. The winner of the game is the first player to win 5 rounds.

Variations

- Try making the smallest number
- Increase the number of dice used

Roll and Make

Materials
Two dice, paper and a pencil

Organisation
Two or more players

Rules
1. Each player rolls the dice. The player with the highest roll goes first.

2. The first player rolls the two dice and makes a two-digit number by arranging the digits in any order.

    For example, if they roll a 2 and a 5, they could make the numeral 25 or 52.

    The same player rolls the two dice again and makes another two-digit number using the numbers rolled.

    For example, they roll a 3 and a 1, they could make the numeral 31 or 13.

3. Player one then adds the two largest numbers created.

    For example, 52 and 31 (52 + 31 = 84. The total is 84)

4. Player 2 follows Steps 1 to 3.

5. The player with the highest total is the winner of the round and scores a point.

6. Play continues for 5 rounds. The player with the most wins after 5 rounds is the overall winner.

Variations
- Use subtraction instead of addition
- The lowest total is the winner
- Increase/decrease the number of dice

One Hundred

100

Materials
Two dice, paper and a pencil

Organisation
Two or more players

Rules
1. Throw two dice three times to make three pairs of numbers eg. 5, 2 and 3, 1 and 2, 3.

2. Each player has to arrange each pair of digits to form a number.

3. Each two-digit number is then added. The player with the total closest to 100 is the winner.

| 5 | 2 | + | 3 | 1 | + | 2 | 3 | = | 106 |

| 5 | 2 | + | 1 | 3 | + | 3 | 2 | = | 97 |

First to the Target

Materials

One dice, paper and pencil

Organisation

Two or more players

Rules

1. Each player rolls a dice. The player with the lowest roll goes first.

2. The first player rolls the dice over and over again, adding up the numbers after each roll. They may stop rolling at any time but they must remember their total score. They will continue adding to this total score when it is their turn again.

3. If the player rolls a number 1, all their points are lost and it is the next players turn.

4. The first player to get a score of 30 points wins the game.

Variations

- Add extra dice
- Change the target to 50, 100 or 500
- Roll 2 dice twice eg. 52 + 34 and continue the game in the same way. Players lose all their points if the number 1 is rolled on one or both dice

Double or Halve?

Materials

One dice, paper and pencil

Organisation

Two or more players

Rules

1. Decide on a target number eg. 100. This is the total that both players are trying to make.

2. Player 1 rolls a dice. They can choose whether to double the number shown or halve the number shown. If the number rolled, can't be halved, they must double it.

3. Player 2 rolls a dice. In the same way, they can choose whether to double the number shown or halve the number shown. If the number rolled, can't be halved, it must be doubled.

4. Play continues like this with each player rolling a dice and halving or doubling the number and adding the result onto the running total.

5. The winner is the player who reaches the agreed target exactly.

Variations

- Reverse the game and start from the target number eg. 100 and subtract the number rolled each time. The winner is the player who reaches zero first.
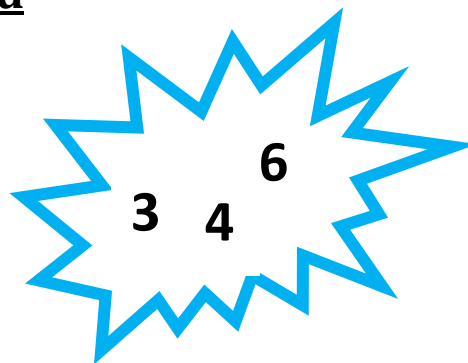
Number Cloud

Materials

One dice, paper and pencil

Organisation

Two or more players

Rules

1. Each player rolls one dice three times and records the numbers rolled. For example, 3, 4, 6.

2. Use these digits to make as many number combinations as you can by arranging the digits in any order eg. 346, 364, 634, 643, 436, 463.

Answer the following questions for each number that you made?

- What is the smallest number?
- What is the largest number?
- What number comes before?
- What number comes after/next?
- Can you count by 2's, 3's, 5's and 10's from this number?
- What is 100 less?
- What is 100 more?
- Is it an odd or even number?
- Can you think of three combinations?

3   4   6

Order Race

Materials

Two dice, paper and pencil

Organisation

Two players

Rules

1. One player rolls the dice to make a two-digit number and records it. For example, a 2 and a 5 are rolled, so the number 25 is recorded.

2. The next player rolls the dice to make another two-digit number and records it. For example, a 6 and a 3 are rolled, so the number 63 is recorded.

3. Repeat the above steps, so each player has a turn at rolling the dice three times. There should be six numbers recorded in total. For example, 25, 63, 42, 51, 33, 16.

4. The first player arranges the numbers recorded from the smallest to the largest. ie. 16, 25, 33, 42, 51, 63.

5. The other player arranges the numbers recorded from the largest to the smallest. ie. 63, 51, 42, 33, 25, 16.

6. The first player to order the numbers correctly wins.

Hit The Deck

Materials

Two dice, paper and pencil

Organisation

Two or more players

Rules

1. One player rolls two dice. The numbers rolled create a multiplication sum.

2. The first player to call the product of the dice is awarded that number of points.

3. No points are awarded for an incorrect answer. If both players say the answer at the same time each player gets the points.

4. If two dice combinations with the same answer are rolled after each other. For example, " 2 x 6 equals 12 and 3 x 4 also equals 12."

5. The first player to call out "Hit the Deck" receives double points.

6. The winner is the first player to achieve 100 or more points.

Variations

- Aim for an agreed total of winning points
- Use addition instead of multiplication
- Use a different number of dice

<u>Dice Calculations</u>

<u>Materials</u>

Two dice, paper and pencil

<u>Organisation</u>

Two or more players

<u>Rules</u>

1. Each player rolls two dice twice – to get 4 numbers
     For example 4, 3, 2, 6

2. Each player uses the numbers rolled to make a number sentence which gives a single digit answer.

3. The answer becomes the score for that player.
     6 + 2 + 3 – 4 = 7 (7 points)
     4 + 6 + 2 - 3 = 9 (9 points)

4. The best combination of numbers is the one that produces the largest single digit and so the largest score.

7. Play 5 rounds. The player with the highest score wins.

<u>Variations</u>

- Aim to make the lowest score

Make 100

Materials

One dice, paper and pencil

Organisation

Two or more players

Rules

1. The first player rolls one dice. Player(s) may choose to multiply that number by 10 or just keep it as the number rolled. For example, if a 2 is rolled, it can be scored as a 2 or 20 (2 x 10). Once a decision has been made it can't be changed.

2. The dice is rolled again. If the number 4 is rolled, players must decide to score this as a 4 or 40 (4 x 10) and record it, adding the score to the previous score each time.

3. Play 5 rounds. The player who scores 100 or the number closest to (but below) 100 wins.

Variations
- Roll more dice
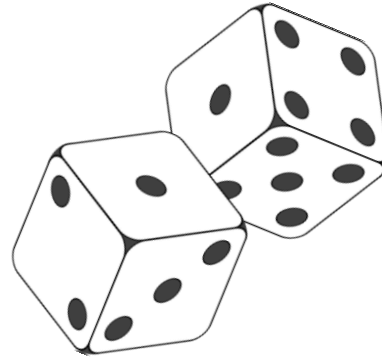- Set a different target score

Maximum – Minimum

Materials

Two dice, paper and pencil.

Organisation

Two or more players

Rules

1. Each player begins with 100 points.

2. Roll two dice and make a two-digit number, by arranging the digits in any order.

   For example, if a 2 and a 3 are rolled, you could make 23 or 32.

3. Add the number made to your 100 starting points.
   For example, 100 + 23 = 123

4. Keep playing by adding the 2-digit number rolled to your score until you reach 200.

5. The player with a total that reaches closest to 200 is the winner.

Variations

- Change the finishing value or starting score
- Use 3 or 4 dice