### Math Games with a Pair of Dice

#### Games to play at home to practice math skills

#### Multiplication/Division Chart

<table>
<thead>
<tr>
<th>x</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>18</td>
<td>21</td>
<td>24</td>
<td>27</td>
<td>30</td>
<td>33</td>
<td>36</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>20</td>
<td>24</td>
<td>28</td>
<td>32</td>
<td>36</td>
<td>40</td>
<td>44</td>
<td>48</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
<td>50</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
<td>30</td>
<td>36</td>
<td>42</td>
<td>48</td>
<td>54</td>
<td>60</td>
<td>66</td>
<td>72</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>35</td>
<td>42</td>
<td>49</td>
<td>56</td>
<td>63</td>
<td>70</td>
<td>77</td>
<td>84</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>16</td>
<td>24</td>
<td>32</td>
<td>40</td>
<td>48</td>
<td>56</td>
<td>64</td>
<td>72</td>
<td>80</td>
<td>88</td>
<td>96</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>18</td>
<td>27</td>
<td>36</td>
<td>45</td>
<td>54</td>
<td>63</td>
<td>72</td>
<td>81</td>
<td>90</td>
<td>99</td>
<td>108</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>22</td>
<td>33</td>
<td>44</td>
<td>55</td>
<td>66</td>
<td>77</td>
<td>88</td>
<td>99</td>
<td>110</td>
<td>121</td>
<td>132</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>24</td>
<td>36</td>
<td>48</td>
<td>60</td>
<td>72</td>
<td>84</td>
<td>96</td>
<td>108</td>
<td>120</td>
<td>132</td>
<td>144</td>
</tr>
</tbody>
</table>
Tips for playing math games with dice:

- **Contain the dice!** Put your dice in a small plastic container. Kids shake the dice and read the numbers through the plastic.

- You can use dice from board games you may already have in the house. Don’t forget to put them back when you are done.

- Most games can also be played with numbered cards as well.

---

**Players**

2

**Materials:** 2 dice, scratch paper to keep score

**How to Play:** Be the first one to reach 100 points! Players take turns rolling two dice and finding their sum. On a turn, a player can keep rolling - be a PIG - and add to their score. But beware - if a player rolls a 1 on either dice, all points for that turn are lost.

**Examples:**

Joe rolls \[\begin{array}{c}
\bullet \\
\bullet
\end{array}\] so his is 5.

He keeps rolling, and gets \[\begin{array}{c}
\bullet \\
\bullet
\end{array}\] for 6 points.

Now his running score is 11. He can stop at 11 or keep going.

He rolls one more time, \[\begin{array}{c}
\bullet \\
\bullet
\end{array}\] for 9 points.

Now his score is 20. He decides to stop and keep 20 for his score that round.

Jane rolls \[\begin{array}{c}
\bullet \\
\bullet
\end{array}\] for 11 points. She rolls one more time and gets a \[\begin{array}{c}
\bullet \\
\bullet
\end{array}\] Since she rolled a 1, her score is 0 for that round.
Dice War

Players: 2

Materials: 2 Dice

How to Play: Roll two dice and add the two numbers to find a sum. The sum becomes your score for that round. First player to 100 wins.

\[2 + 5 = 7\]

This game can also be played with subtraction

\[6 - 2 = 4\]

and with multiplication

\[3 \times 4 = 12\]

Make 10

Players: 2

Materials: 1 or 2 dice, scratch paper

One die version: One die is rolled. Players try to find what number needs to be added to make ten. The number needed to make ten becomes the player's score for that round.

If a 3 is rolled, then a player would say 7 to make a 10 and their score is 7.

Two dice version: Two dice are rolled. Players must add or subtract to make a ten. Two sixes are rolled. \[6 + 6 = 12\] so \[12 - 2 = 10\] so 2 is the score.

Use the Ten Frames on the next page for support.
Ten Frames

Players: 2

Materials: 2 dice, graph paper, colored pencil or crayon for each player

How to Play: Roll 2 dice and draw a rectangle using the numbers rolled as the length and width on graph paper. Continue until there is no room to draw any more rectangles. Add the areas of all your rectangles and the highest score wins.

Block Out

Players: 2

Materials: 2 dice, graph paper, colored pencil or crayon for each player

How to Play: Roll 2 dice and draw a rectangle using the numbers rolled as the length and width on graph paper. Continue until there is no room to draw any more rectangles. Add the areas of all your rectangles and the highest score wins.
**101 and Out**

**Players:** 2

**Materials:** 1 die, scratch paper

**How to Play:** Copy the game board below. Roll the die six times. Each roll has to count. You can count the rolls as either ones or tens. Keep a running total as you play. The closest to 101 without going over wins.

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 or 10</td>
<td>4</td>
<td>4 or 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2 or 20</td>
<td>5</td>
<td>5 or 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3 or 30</td>
<td>6</td>
<td>6 or 60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Player 1**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>5 or 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>+</td>
<td>50</td>
<td>+</td>
<td>4</td>
<td>+</td>
</tr>
<tr>
<td>20</td>
<td>+</td>
<td>4</td>
<td>+</td>
<td>3</td>
<td>=</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Player 2**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5 or 50</td>
<td>10</td>
<td>10 or 60</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>50</td>
<td>+</td>
<td>6</td>
<td>+</td>
<td>10</td>
<td>+</td>
</tr>
<tr>
<td>30</td>
<td>+</td>
<td>2</td>
<td>+</td>
<td>4</td>
<td>=</td>
</tr>
<tr>
<td>Total</td>
<td>102 so out</td>
<td>Player 1 wins!</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Closest to 100**

**Players:** 2

**Materials:** 2 dice, 120 chart (optional), scratch paper

**How to Play:** Roll two dice and create a 2-digit number.

This could make 53 or 35.

Now, mentally find the difference between the 2-digit number and 100. One way to find the difference is to count up. For example, if a number rolled is 53, count up by 10s and then add the 1s to get to 100.

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>63</td>
<td>73</td>
<td>83</td>
<td>93</td>
<td>100</td>
</tr>
</tbody>
</table>

53 is 47 from 100

For each round, the score is the difference from 100. The player with a score closest to 100 after 5 rounds wins.
Trash Can Game

Players 2

Materials: 1 die, scratch paper

How to Play: Draw a game board like on the facing page. Roll your die and pick where to put your number. **Once placed, a digit cannot be moved.** You have four rolls to make a number.

Write the number you made and the greatest number you can make with those digits. Then compare them with a <, > or =.

**Example:**

\[
\begin{array}{ccc}
H & T & O \\
\hline
5 & 3 & 6
\end{array}
\]

Trash can

\[
\begin{array}{ccc}
\h & T & O \\
\hline
5 & 3 & 6
\end{array}
\]

\[
\begin{array}{ccc}
\h & T & O \\
\hline
5 & 3 & 6
\end{array}
\]

Trash can

\[
\begin{array}{ccc}
\h & T & O \\
\hline
5 & 3 & 6
\end{array}
\]

Trash can

\[
\begin{array}{ccc}
\h & T & O \\
\hline
5 & 3 & 6
\end{array}
\]

Trash can

The player who creates the largest number each round gets a point.