In the Running for the Olympics

Rio de Janeiro in 2016

A Mathematical Project for Students

Barbara Healy BSc BEd
INSTRUCTIONS TO STUDENTS

- The purpose of this unit of work, based on the theme “In the Running for the Olympics”, is to help you to revise your mathematics in the context of a problem solving activity.

- Diagrams in this book are not drawn to scale. Use the measurements on each of the diagrams in your calculations.

- Use the answers to the clues to complete the crossword on the last page of this book.

A NOTE TO TEACHERS AND PARENTS

Five good reasons to use this project with your students.
- Bring mathematics to life with this project
- Introduce new topics and revise work
- Provide extra work for mathematically gifted students
- Give a sense of achievement to students who find mathematics difficult
- Classroom trials show that students love doing this project

Mathematics topics covered in the project “In the Running for the Olympics”

- digital time
- movement on a grid
- addition, subtraction, multiplication, division
- prime numbers
- Roman Numerals
- number sequences
- number and money word problems
- time (days, weeks, months, years, decades)
- puzzles using a grid
- triangular numbers
- square numbers
- decimals (addition, subtraction, multiplication)
- millilitres, litres
- probability and statistics
- grams, kilograms, tonnes
- perimeter
- nets of solids
- cylinder
- triangular prism
- cube
- square pyramid
- cone
- triangular pyramid
- logic puzzles
- cryptograms
- magic squares
- angles
Let the Games begin!

My name is ________________________________

• I set out to discover some Olympic facts
  at (time)___________________________________
  on (day) _________________________________
  date  ___________________________________

• I found the names of the cities that have hosted the Olympic Games
  at (time)___________________________________
  on (day) _________________________________
  date  ___________________________________

• The time taken to solve the problems and to complete the crossword was
  ________________________________
Solve the clues 1 - 6 and find the name of a city that has hosted the Olympic Games.

CLUE 1.

Write half past six in digital time.

Write the answer you have found in the box below.

CLUE 2.

Which one of the following is the latest time in the day?

6:15  6:30  6:03  6:51

Write the answer you have found in the box below.

CLUE 3.

What is 6:05 + 20 minutes in digital time?

Write the answer you have found in the box below.

DID YOU KNOW
THAT . . .

Ray Ewry of the USA won three successive gold medals in the standing long jump at the 1900, 1904 and 1908 Olympic Games?
Olympic Crossword

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. 
13. 
14. 
15. 
16. 
17. 
18. 
19. 
20. 
21. 

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• Bring mathematics to life with these projects

• Introduce new topics and revise work

• Provide extra work for mathematically gifted students

• Give a sense of achievement to students who find mathematics difficult

• Other Mathematical Projects available in this series:
  ♦ In Search of the Holy Grail (Year 8 / Year 9)
  ♦ In Training for the Olympics (Year 7 / Year 8)

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In the Running for the Olympics

Rio de Janeiro in 2016

Answers

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• Olympic Cities

<table>
<thead>
<tr>
<th>No.</th>
<th>City</th>
<th>Year</th>
<th>No.</th>
<th>City</th>
<th>Year</th>
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<tbody>
<tr>
<td>1</td>
<td>Athens</td>
<td>1896</td>
<td>16</td>
<td>Mexico City</td>
<td>1968</td>
</tr>
<tr>
<td>2</td>
<td>Paris</td>
<td>1900</td>
<td>17</td>
<td>Munich</td>
<td>1972</td>
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<tr>
<td>3</td>
<td>St Louis</td>
<td>1904</td>
<td>18</td>
<td>Montreal</td>
<td>1976</td>
</tr>
<tr>
<td>4</td>
<td>London</td>
<td>1908</td>
<td>19</td>
<td>Moscow</td>
<td>1980</td>
</tr>
<tr>
<td>5</td>
<td>Stockholm</td>
<td>1912</td>
<td>20</td>
<td>Los Angeles</td>
<td>1984</td>
</tr>
<tr>
<td>6</td>
<td>Antwerp</td>
<td>1920</td>
<td>21</td>
<td>Seoul</td>
<td>1988</td>
</tr>
<tr>
<td>7</td>
<td>Paris</td>
<td>1924</td>
<td>22</td>
<td>Barcelona</td>
<td>1992</td>
</tr>
<tr>
<td>8</td>
<td>Amsterdam</td>
<td>1928</td>
<td>23</td>
<td>Atlanta</td>
<td>1996</td>
</tr>
<tr>
<td>9</td>
<td>Los Angeles</td>
<td>1932</td>
<td>24</td>
<td>Sydney</td>
<td>2000</td>
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<tr>
<td>10</td>
<td>Berlin</td>
<td>1936</td>
<td>25</td>
<td>Athens</td>
<td>2004</td>
</tr>
<tr>
<td>11</td>
<td>London</td>
<td>1948</td>
<td>26</td>
<td>Beijing</td>
<td>2008</td>
</tr>
<tr>
<td>12</td>
<td>Helsinki</td>
<td>1952</td>
<td>27</td>
<td>London</td>
<td>2012</td>
</tr>
<tr>
<td>14</td>
<td>Rome</td>
<td>1960</td>
<td>29</td>
<td>Tokyo</td>
<td>2020</td>
</tr>
<tr>
<td>15</td>
<td>Tokyo</td>
<td>1964</td>
<td>30</td>
<td></td>
<td>2024</td>
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The cities which have hosted more than one Olympic Games are: Athens, London, Los Angeles, Paris and Tokyo.

Some Olympic Games were cancelled.

**Rio Olympics**

**Mathematics and English**

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**NAME**

**SCHOOL**

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