

Reasoning and Problem Solving

Place Value Consolidation – Year 6

National Curriculum Objectives

Mathematics Year 6: [Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit](#)

Mathematics Year 6: [Round any whole number to a required degree of accuracy](#)

Mathematics Year 6: [Use negative numbers in context, and calculate intervals across zero](#)

Mathematics Year 6: [Solve number and practical problems that involve all of the above](#)

About This Resource

This resource is aimed at Year 6 Expected and has been designed to give children the opportunity to consolidate the skills they have learned in Autumn Block 1 Place Value.

The questions are based on a selection of the same ‘small steps’ that are addressed in the block, but are presented in a different way so children can work through the pack independently and demonstrate their understanding and skills.

Small Steps

Compare and order any number

Round any number

Negative numbers

More [Year 6 Place Value](#) resources.

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Reasoning and Problem Solving
Place Value Consolidation – Year 6

Your record company 'Drop the Mic Records' is preparing for the end of year awards show, an event which celebrates the best artists on their books. The managing director has given top ten artists and wants you to decide which four have been the most successful and should be nominated for the awards.



1. The first category is Best Selling Artist.

Rank the artists based on number of tracks streamed from best selling (1) to least sales (10).

Artist	Tracks Streamed	Ranking
Jerome De Souza	8,434,679	
Mylene Robb	8,589,956	
EEzee	7,465,767	
Shannon Grace	7,465,980	
Xtream	9,003,004	
Bobbie Fry	9,003,998	
Ape Shape	4,678,567	
Northern Quarter	8,898,435	
Revolving Doors	8,989,345	
STEAL	9,304,098	

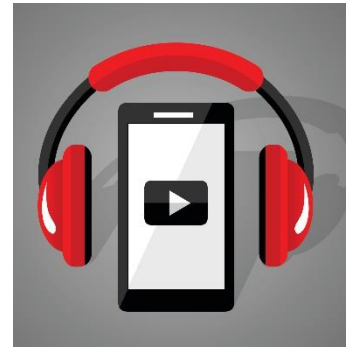
Complete the prompt card for the presenter below:

★ The top four artists nominated for the 'Best Selling Artist', in order of streamed tracks are... ★

4 th	<input type="text"/>
3 rd	<input type="text"/>
2 nd	<input type="text"/>
1 st	<input type="text"/>

Reasoning and Problem Solving
Place Value Consolidation – Year 6

2. Over the last month Drop the Mic have been promoting their top 5 artists using a text poll. National radio has advertised the website and text numbers and the results are in!

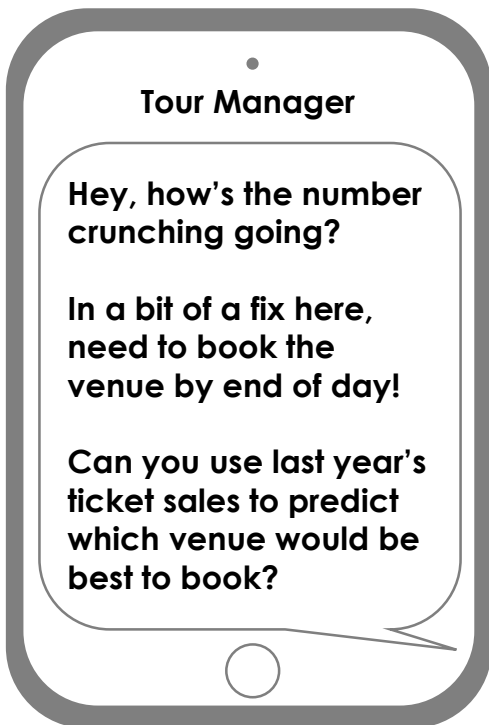


Round the numbers to the nearest 10,000 to find out who is this year's 'Fans' Choice'.

Artist	Text Votes	Rounded Numbers
Bobbie Fry	834,865	
Northern Quarter	846,978	
Revolving Door	823,500	
STEAL	845,400	
Xtream	832,450	

The Fans' Choice Award goes to....

3. **BING!** A text message has landed in your inbox from the tour manager...



The following venues are available to book and have a variety of seating capacities:

London Arena seats fifty thousand.

Manchester Dome seats forty five thousand.

Birmingham Concert Hall seats thirty eight thousand.

Edinburgh Court seats forty two thousand.

Leeds Arena seats forty seven thousand.

Turn over for ticket sales data...

Reasoning and Problem Solving
Place Value Consolidation – Year 6

Round the ticket sales to the nearest thousand and decide which venue would be able to accommodate any of the artists.
Remember to write your answer in the text message to reply.

Artist	Ticket Sales	Rounded to nearest thousand
Jerome De Souza	44,560	
Mylene Robb	46,890	
EEzee	36,009	
Shannon Grace	21,906	
Xtream	39,020	
Bobbie Fry	37,356	
Ape Shape	41,498	
Northern Quarter	34,976	
Revolving Doors	46,875	
STEAL	47,346	

Reply to: Tour Manager

Hi , according to my calculations the best venue to book would be:

Let's hope it's still available!



Reasoning and Problem Solving
Place Value Consolidation – Year 6

4. Now we have sorted the awards and the venue, attention turns to the VIP guests. Each artist has submitted a guest list including their friends and family. The lists need to be signed off to make sure they have enough space in the VIP area and enough seats at the tables. Calculate how many invites each artist has left to send out, some artists have been inviting too many people. You may need to use negative numbers.



Artist	Seats Available	Guests Invited	Remaining Invites
Jerome De Souza	15	23	
Mylene Robb	10	8	
EEzee	20	14	
Shannon Grace	8	12	
Xtream	15	32	
Bobbie Fry	20	20	
Ape Shape	15	10	
Northern Quarter	18	26	
Revolving Doors	20	10	
STEAL	23	31	

5a. If the invites remained the same could the VIP area hold everyone invited? Are there extra seats or will some guests need to be uninvited? Explain your answer.

5b. Can you suggest any other resolution to the situation?

Reasoning and Problem Solving
Place Value Consolidation – Year 6

1.

Artist	Tracks Streamed	Ranking
Jerome De Souza	8,434,679	7
Mylene Robb	8,589,956	6
EEzee	7,465,767	9
Shannon Grace	7,465,980	8
Xtream	9,003,004	3
Bobbie Fry	9,003,998	2
Ape Shape	4,678,567	10
Northern Quarter	8,898,435	5
Revolving Doors	8,989,345	4
STEAL	9,304,098	1

4th – Revolving doors; 3rd – Xtream; 2nd – Bobbie Fry; 1st - STEAL

2.

Artist	Text Votes	Rounded Numbers
Bobbie Fry	834,865	830,000
Northern Quarter	846,978	850,000
Revolving Door	823,500	820,000
STEAL	845,400	840,000
Xtream	832,450	830,000

Northern Quarter

3.

Artist	Ticket Sales	Rounded to nearest thousand
Jerome De Souza	44,560	45,000
Mylene Robb	46,890	47,000
EEzee	36,009	36,000
Shannon Grace	21,906	22,000
Xtream	39,020	39,000
Bobbie Fry	37,356	37,000
Ape Shape	41,498	41,000
Northern Quarter	34,976	35,000
Revolving Doors	46,875	47,000
STEAL	47,346	47,000

Reply to: Tour Manager

Hi , according to my calculations the best venue to book would be:

Leeds Arena

Let's hope it's still available!

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Place Value Consolidation – Year 6

4.

Artist	Seats Available	Guests Invited	Remaining Invites
Jerome De Souza	15	23	- 8
Mylene Robb	10	8	2
EEzee	20	14	6
Shannon Grace	8	12	- 4
Xtream	15	32	- 17
Bobbie Fry	20	20	0
Ape Shape	15	10	5
Northern Quarter	18	26	- 8
Revolving Doors	20	10	10
STEAL	23	31	- 8

5a. The total number of seats available is 164 and there are 186 guests invited so 22 guests will need to be uninvited.

5b. Various answers, for example: find a bigger venue; place more tables; hold the venue outside etc.