

Euro 2024 Stadium Capacities Maths Activity

Aim: I can solve maths problems in a real-life context.

Stadium	City	Capacity
Leipzig Stadium	Leipzig	40 000
Stuttgart Arena	Stuttgart	51 000
Düsseldorf Arena	Düsseldorf	47 000
BVB Stadion Dortmund	Dortmund	62 000
Volksparkstadion Hamburg	Hamburg	49 000
Cologne Stadium	Cologne	43 000
Munich Football Arena	Munich	66 000
Frankfurt Arena	Frankfurt	47 000
Olympiastadion Berlin	Berlin	71 000
Arena AufSchalke	Gelsenkirchen	50 000



Euro 2024 Stadium Capacity

Questions

1. Which stadium has the largest stadium capacity and how many spectators can it hold?

2. Which stadium has the smallest stadium capacity and how many spectators can it hold?

3. What is the difference in stadium capacity between the largest and smallest stadiums?

4. Order the stadium capacities from highest to lowest.

5. What is the total combined capacity of Frankfurt Arena and Cologne Stadium?

6. England will be playing one of their group games at Arena AufSchalke and another at Cologne Stadium. How many spectators altogether will be able to watch these matches if the stadium is at capacity for both games?

7. Does Olympiastadion Berlin have a higher or lower capacity than Düsseldorf Arena and Leipzig Stadium combined? Explain your answer.

Extension Task

What is the total combined capacity of all the stadiums?

Challenge:

Make up two questions for a partner to answer.



Euro 2024 Stadium Capacity

Answers

1. Which stadium has the largest stadium capacity and how many spectators can it hold?
Olympiastadion Berlin - it can hold 71 000 spectators
2. Which stadium has the smallest stadium capacity and how many spectators can it hold?
Leipzig Stadium - it can hold 40 000 spectators
3. What is the difference in stadium capacity between the largest and smallest stadiums?
 $71\ 000 - 40\ 000 = 31\ 000$
4. Order the stadium capacities from largest to smallest.
71 000
66 000
62 000
51 000
50 000
49 000
47 000
47 000
43 000
40 000
5. What is the total combined capacity of Frankfurt Arena and Cologne Stadium?
 $47\ 000 + 43\ 000 = 90\ 000$
6. England will be playing one of their group games at Arena AufSchalke and another at Cologne Stadium. How many spectators altogether will be able to watch these matches if the stadium is at capacity for both games?
 $50\ 000 + 43\ 000 = 93\ 000$
7. Does Olympiastadion Berlin have a higher or lower capacity than Düsseldorf Arena and Leipzig Stadium combined? Explain your answer.
 $47\ 000 + 40\ 000 = 87\ 000$
Olympiastadion Berlin has a lower capacity than Düsseldorf Arena and Leipzig Stadium combined because Olympiastadion Berlin can hold 71 000 and the other two combined can hold 87 000.

Extension Task: What is the total combined capacity of all the stadiums? **526 000**

Euro 2024 Stadium Capacity

Questions

1. What is the difference in stadium capacity between the largest and smallest stadiums?

2. What is the difference in capacity between BVB Stadion Dortmund and the stadium in Hamburg?

3. What is the total combined capacity of Munich Football Arena, BVB Stadion Dortmund and Düsseldorf Arena?

4. If the Volksparkstadion Hamburg is filled to half capacity, how many spare seats are there?

5. If Olympiastadion Berlin is filled to three-quarter capacity, how many people are attending the match? How many spare seats are there?

6. Volksparkstadion Hamburg will be hosting four matches during the group stages. If each match is sold out, what will be the total number of spectators that attend this venue?

7. England will be playing their group games in Gelsenkirchen, Cologne and Frankfurt. How many spectators altogether will be able to watch these matches if the stadiums are at capacity for all of the games?

8. What is the total combined capacity of all the stadiums?

Extension Task

Order the stadium capacities from highest to lowest, and then find the mean value.

Challenge:

Make up three questions for a partner to answer. Try to include 1- and 2-step problems.

1. What is the difference in stadium capacity between the largest and smallest stadiums?

$$71\ 000 - 40\ 000 = 31\ 000$$

2. What is the difference in capacity between BVB Stadion Dortmund and the stadium in Hamburg?

$$62\ 000 - 49\ 000 = 13\ 000$$

3. What is the total combined capacity of Munich Football Arena, BVB Stadion Dortmund and Düsseldorf Arena?

$$66\ 000 + 62\ 000 + 47\ 000 = 175\ 000$$

4. If the Volksparkstadion Hamburg is filled to half capacity, how many spare seats are there?

$$49\ 000 \div 2 = 24\ 500$$

There are 24 500 spare seats.

5. If Olympiastadion Berlin is filled to three-quarter capacity, how many people are attending the match? How many spare seats are there?

$$71\ 000 \div 4 = 17\ 750$$

$$17\ 750 \times 3 = 53\ 250$$

There are 53 250 people attending the match.

There are 17 750 spare seats.

6. Volksparkstadion Hamburg will be hosting four matches during the group stages. If each match is sold out, what will be the total number of spectators that attend this venue?

$$49\ 000 \times 4 = 196\ 000$$

7. England will be playing their group games in Gelsenkirchen, Cologne and Frankfurt. How many spectators altogether will be able to watch these matches if the stadiums are at capacity for all of the games?

$$50\ 000 + 43\ 000 + 47\ 000 = 140\ 000$$

8. What is the total combined capacity of all the stadiums?

$$526\ 000$$

Extension Task

Order the stadium capacities from highest to lowest, and then find the mean value.

$$71\ 000 \quad 47\ 000$$

$$66\ 000 \quad 47\ 000$$

$$62\ 000 \quad 43\ 000$$

$$51\ 000 \quad 40\ 000$$

$$50\ 000 \quad 526\ 000 \div 10 = 52\ 600$$

$$49\ 000 \quad 52\ 600 \text{ is the mean value.}$$

Euro 2024 Stadium Capacity

Questions

1. What is the combined total capacity of the largest and smallest stadiums?

2. What is the difference in stadium capacity between the largest and smallest stadiums?

3. Olympiastadion Berlin will be hosting six matches during Euro 2024. If each match is sold out, what will be the total number of spectators that attend this venue?

4. What is the total combined capacity of all of the stadiums that hold less than 50 000 spectators?

5. If Düsseldorf Arena is filled to three-fifths capacity, how many people are attending the match? How many spare seats are there?

6. If BVB Stadion Dortmund is filled to four-fifths capacity and Munich Football Arena is filled to two-thirds capacity, which stadium has the most spectators and by how many?

7. England will be playing one of their pool matches in Gelsenkirchen, one in Cologne and one in Frankfurt. If the stadiums are at four-fifths capacity for all three games, how many spectators altogether will watch these matches?

8. What is the total combined capacity of all the stadiums?

9. Find the mean value of the stadium capacities.



Extension Task

Volksparkstadion Hamburg will host five matches altogether at Euro 2024. Leipzig Stadium will host four matches altogether at Euro 2024.

If Volksparkstadion Hamburg is only three-quarters full for each of its matches and Leipzig Stadium is at capacity for each of its matches, which stadium will have held the least number of spectators in total?

Challenge: Make up 4 questions for your partner to work out. Include 1 and 2-step problems

Euro 2024 Stadium Capacity

Answers

1. What is the combined total capacity of the largest and smallest stadiums?
 $71\ 000 + 40\ 000 = 111\ 000$
2. What is the difference in stadium capacity between the largest and smallest stadiums?
 $71\ 000 - 40\ 000 = 31\ 000$
3. Olympiastadion Berlin will be hosting six matches during Euro 2024. If each match is sold out, what will be the total number of spectators that attend this venue?
 $71\ 000 \times 6 = 426\ 000$
4. What is the total combined capacity of all of the stadiums that hold less than 50,000 spectators?
 $40\ 000 + 47\ 000 + 49\ 000 + 43\ 000 + 47\ 000 = 226\ 000$
5. If Düsseldorf Arena is filled to three-fifths capacity, how many people are attending the match? How many spare seats are there?
 $47\ 000 \div 5 = 9\ 400$
 $9\ 400 \times 3 = 28\ 200$
 $9\ 400 \times 2 = 18\ 800$ spare seats.
There are 28 200 people attending the match.
There are 18 800 spare seats.
6. If BVB Stadion Dortmund is filled to four-fifths capacity and Munich Football Arena is filled to two-thirds capacity, which stadium has the most spectators and by how many?
BVB Stadion Dortmund
 $62\ 000 \div 5 = 12\ 400$
 $12\ 400 \times 4 = 49\ 600$
Munich Football Arena
 $66\ 000 \div 3 = 22\ 000$
 $22\ 000 \times 2 = 44\ 000$
 $49\ 600 - 44\ 000 = 5\ 600$
BVB Stadion Dortmund would have the most spectators by 5 600.

Answers

7. England will be playing one of their pool matches in Gelsenkirchen, one in Cologne and one in Frankfurt. If the stadiums are at four-fifths capacity for all three games, how many spectators altogether will watch these matches?

Arena AufSchalke (Gelsenkirchen)

$$50\ 000 \div 5 = 10\ 000$$

$$10\ 000 \times 4 = 40\ 000$$

Cologne Stadium (Cologne)

$$43\ 000 \div 5 = 8\ 600$$

$$8\ 600 \times 4 = 34\ 400$$

Frankfurt Arena (Frankfurt)

$$47\ 000 \div 5 = 9\ 400$$

$$9\ 400 \times 4 = 37\ 600$$

$$40\ 000 + 34\ 400 + 37\ 600 = 112\ 000 \text{ spectators.}$$

8. What is the total combined capacity of all the stadiums?

526 000

9. Find the mean value of the stadium capacities.

71 000

66 000

62 000

51 000

50 000

49 000

47 000

47 000

43 000

40 000

$$526\ 000 \div 10 = 52\ 600$$

52 600 is the mean value.

Answers

Extension Task

Volksparkstadion Hamburg will host five matches altogether at Euro 2024. Leipzig Stadium will host four matches altogether at Euro 2024.

If Volksparkstadion Hamburg is only three-quarters full for each of its matches and Leipzig Stadium is at capacity for each of its matches, which stadium will have held the least number of spectators in total?

$$49\ 000 \div 4 = 12\ 250$$

$$12\ 250 \times 3 = 36\ 750$$

$$36\ 750 \times 5 = 183\ 750$$

Five matches at the Volksparkstadion Hamburg at three-quarters full for each match would have 183 750 spectators in total.

$$40\ 000 \times 4 = 160\ 000$$

Four matches at the Leipzig Stadium with each match sold out would have 160 000 spectators.

Therefore, the Leipzig Stadium would have held the least number of spectators in total.