

Numerical Reasoning

Test 15



Solutions Booklet

Instructions

This practice test contains **30 questions**, and you will have **30 minutes** to answer them.

Each question will have four possible answers, one of which is correct.

Calculators are permitted for this test. It's recommended to have some rough paper for your calculations. You will have to work quickly and accurately to perform well in this test. If you don't know the answer to a question, leave it and come back to it if you have time.

Try to find a time and place where you will not be interrupted during the test. When you are ready, turn to the next page and begin.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	9	£510.00
Conference Hall	4	7	1	3	£820.00
Renta-space	2	1	6	1	£1,000.00
Johnson Venues	6	6	9	8	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q1 You want to book the venue with the fewest ratings at or below "Low". Which venue are you least likely to book?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1: Identify the venue with the highest number of ratings at or below "Low."

Meeting Room = 0 ratings at or below "Low"

Conference Hall = 2 ratings at or below "Low"

Renta-space = 3 ratings at or below "Low"

Johnson Venues = 0 ratings at or below "Low"

Studio Hire = 1 rating at or below "Low"

Thus, the correct answer is (C) Renta-space.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	9	£510.00
Conference Hall	4	7	1	3	£820.00
Renta-space	2	1	6	1	£1,000.00
Johnson Venues	6	6	9	8	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q2 You select the venues with an "Accessibility" rating at or above "Medium", you then select the venues with no ratings at or below "Low". Of the remaining venues, you choose the cheapest. Which venue have you chosen?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1:

Select the venues with "Accessibility" ratings at or above "Medium".

Meeting Room = 6

Conference Hall = 4

Renta-space = 2

Johnson Venues = 6

Studio Hire = 5

Step 2: Of the applicable venues, select the venues with no ratings at or below "Low."

Meeting Room = 0 ratings at or below "Low"

Johnson Venues = 0 ratings at or below "Low"

Studio Hire = 1 rating at or below "Low"

Step 3 – Of the applicable venues, select the cheapest.

Meeting Room = £510.00

Johnson Venues = £520.00

Thus, the correct answer is (A) Meeting Room.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	5	£510.00
Conference Hall	4	7	1	7	£820.00
Renta-space	2	1	6	9	£1,000.00
Johnson Venues	6	6	9	5	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q3 You only want to book a venue with an overall average rating of "Medium" or higher across all features, and a "Catering" rating which would be considered greater than the average across the 5 venues. Which venue do you book?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1: Identify the venues with an overall average rating of "Medium" or higher.

Meeting Room = $(6 + 5 + 4 + 5) / 4 = 5$

Conference Hall = $(4 + 7 + 1 + 7) / 4 = 4.75$

Renta-space = $(2 + 1 + 6 + 9) / 4 = 4.5$

Johnson Venues = $(6 + 6 + 9 + 5) / 4 = 6.5$

Studio Hire = $(5 + 3 + 6 + 6) / 4 = 5$

Step 2: Of the applicable venues, select a venue with a "Catering" rating which would be considered greater than the average across the 5 venues.

Average catering rating = $(5 + 7 + 9 + 5 + 6) / 5 = 6.4$

Meeting Room = 5

Johnson Venues = 5

Studio Hire = 6

Thus, the correct answer is (F) None of the above.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	9	£510.00
Conference Hall	4	7	1	3	£820.00
Renta-space	2	1	6	1	£1,000.00
Johnson Venues	6	6	9	8	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q4 Of the venues with a rating of "Medium" or above for "Location", you select the venues with an average rating across all features higher than "Studio Hire". Which venue do you choose?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1: Identify the venues with a rating of "Medium" or above for "Location."

Meeting Room = 4

Conference Hall = 1

Renta-space = 6

Johnson Venues = 9

Studio Hire = 6

Step 2: Of the applicable venues, identify the average overall rating for each venue, and select the venue with a rating higher than "Studio Hire".

Renta-space = $(2 + 1 + 6 + 1) / 4 = 2.5$

Johnson Venues = $(6 + 6 + 9 + 8) / 4 = 7.25$

Studio Hire = $(5 + 3 + 6 + 6) / 4 = 5$

Thus, the correct answer is (D) Johnson Venues.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	9	£530.00
Conference Hall	4	7	1	3	£820.00
Renta-space	2	1	6	1	£1,000.00
Johnson Venues	6	6	9	8	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q5 You want to book the venue with the highest overall average you can get while not paying more than £650 per day. Which venue should you book?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1: Identify the venues which charge less than £650 per day.

Meeting Room = £530.00

Conference Hall = £820.00

Renta-space = £1,000.00

Johnson Venues = £520.00

Studio Hire = £820.00

Step 2: Calculate the overall average rating for the applicable venues, and select the venue with the highest average.

Meeting Room = $(6 + 5 + 4 + 9) / 4 = 6$

Johnson Venues = $(6 + 6 + 9 + 8) / 4 = 7.25$

Thus, the correct answer is (D) Johnson Venues.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	3	£510.00
Conference Hall	4	7	1	3	£820.00
Renta-space	2	1	6	1	£1,000.00
Johnson Venues	6	6	9	8	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q6 You want to book a venue with as few ratings at or below "Low" as possible, while not paying more than £3,750 for 5 days. Which venue can you book?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1: Identify which venues would cost less than £3,750 for 5 days.

Meeting Room = £510.00 x 5 = £2,250

Conference Hall = £820.00 x 5 = £4,100

Renta-space = £1,000.00 x 5 = £5,000

Johnson Venues = £520.00 x 5 = £2,600

Studio Hire = £820.00 x 5 = £4,100

Step 2: Of the applicable venues, select the venue with the fewest ratings at or below "Low."

Meeting Room = 1 rating at or below "Low"

Johnson Venues = 0 ratings at or below "Low"

Thus, the correct answer is (D) Johnson Venues.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	9	£510.00
Conference Hall	4	7	1	3	£820.00
Renta-space	2	5	6	2	£1,000.00
Johnson Venues	6	6	9	1	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q7 You do not want to book a venue with the lowest rating for any of the four ratings. Which venue can you book?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1: Select the venue with the lowest number of ratings across any of the four ratings.

Meeting Room = No lowest ratings

Conference Hall = Lowest rating for "Location"

Renta-space = Lowest rating for "Accessibility"

Johnson Venues = Lowest rating for "Catering"

Studio Hire = Lowest rating for "Services"

Thus, the correct answer is (A) Meeting Room.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	5	4	9	£510.00
Conference Hall	4	7	1	3	£820.00
Renta-space	2	5	6	1	£910.00
Johnson Venues	6	6	9	8	£520.00
Studio Hire	5	3	6	6	£820.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q8 The venue with the lowest overall average rating across all features is offering a 25% discount on its "Cost per Day". How much would it cost to book this venue for 3 days?

Answer:

- (A) £1,982.50
- (B) £2,047.50
- (C) £2,112.50
- (D) £2,177.50
- (E) £2,242.50
- (F) None of the above

Step 1: – Identify the venue with the lowest overall average across all features.

$$\text{Meeting Room} = (6 + 5 + 4 + 9) / 4 = 6$$

$$\text{Conference Hall} = (4 + 7 + 1 + 3) / 4 = 3.75$$

$$\text{Renta-space} = (2 + 5 + 6 + 1) / 4 = 3.5$$

$$\text{Johnson Venues} = (6 + 6 + 9 + 8) / 4 = 7.25$$

$$\text{Studio Hire} = (5 + 3 + 6 + 6) / 4 = 5$$

Step 2: Calculate how much it would cost to book this venue for 3 days, with a 25% discount.

$$£910.00 \times 3 = £2,730$$

$$£2,730 - (£2,730 \times 0.25) = £2,047.50$$

Thus, the correct answer is (B) £2,047.50.

Corporate Venue	Accessibility	Services	Location	Catering	Cost per Day
Meeting Room	6	2	9	3	£670.00
Conference Hall	7	6	5	2	£880.00
Renta-space	6	9	1	9	£820.00
Johnson Venues	9	6	6	9	£700.00
Studio Hire	7	2	1	7	£930.00

Ratings Key:

Extremely Low	Very Low	Low	Below Average	Medium	Above Average	High	Very High	Extremely High
1	2	3	4	5	6	7	8	9

Q9 You consider "Location" to be twice as important as "Services" and "Catering". You consider "Accessibility" to be irrelevant. With this in mind, which venue has the highest weighted average across the relevant features?

Answer:

- (A) Meeting Room
- (B) Conference Hall
- (C) Renta-space
- (D) Johnson Venues
- (E) Studio Hire
- (F) None of the above

Step 1: Double the "Location" rating for each venue.

Meeting Room = $9 \times 2 = 18$

Conference Hall = $5 \times 2 = 10$

Renta-space = $1 \times 2 = 2$

Johnson Venues = $6 \times 2 = 12$

Studio Hire = $1 \times 2 = 2$

Step 2: Calculate the weighted average score across the 3 relevant features (not including "Accessibility") and identify the venue with the highest average.

Meeting Room = $(2 + 18 + 3) / 3 = 7.67$

Conference Hall = $(6 + 10 + 2) / 3 = 6$

Renta-space = $(9 + 2 + 9) / 3 = 6.67$

Johnson Venues = $(6 + 12 + 9) / 3 = 9$

Studio Hire = $(2 + 2 + 7) / 3 = 3.67$

Thus, the correct answer is (D) Johnson Venues.

End of test