

## Breakdown by question

$(5.7 + 4.3) \times 78.6$ , correct to two significant figures is? (5 points)

16% of respondents (669 of 4072) answered this question correctly.

[More Details](#)

786	2711
790	669 ✓
78	551
88	105
66	36



How many odd prime numbers are there between 0 and 10? (5 points)

39% of respondents (1587 of 4085) answered this question correctly.

[More Details](#)

1	89
2	140
3	1587 ✓
4	1609
5	660



The ratio of John's height to June's height to 2 : 3. If June is 1.245 metres tall, how tall is John? (5 points)

46% of respondents (1859 of 4015) answered this question correctly.

[More Details](#)

62.25 cm	395
41.5 cm	278
83 cm	1859 ✓
186.75 cm	1322
14.9 cm	161



## JMC 2021 – Breakdown by Question

Find the value of  $-4pq$  if  $p = 2$  and  $q = -1$ . (5 points)

30% of respondents (1176 of 3983) answered this question correctly.

[More Details](#)

● -12	455
● -8	1584
● 6	637
● 8	1176 ✓
● 12	131



A shopkeeper is selling hand sanitiser at a certain price but feels it might fetch more due to the current pandemic. First, he increases its price by 10% and later by an additional 10%. Sales fall off however and he is forced to reduce the price first by 10% and later by a further 10%. What percentage of the original price is the finishing price? Answer to the nearest whole number. (5 points)

14% of respondents (557 of 4042) answered this question correctly.

[More Details](#)

● 80	881
● 98	557 ✓
● 100	2326
● 102	143
● 120	135



Megan bought seven identical chocolate bars. Each cost less than €1 and she got 12 cents change. What amount of money did she give the cashier? (7 points)

45% of respondents (1784 of 3981) answered this question correctly.

[More Details](#)

● €3	224
● €4	342
● €5	538
● €6	1784 ✓
● €7	1093



A class of 20 students averaged 66% in an exam, and another class of 30 averaged 56% in the same exam. What is the average percentage for all 50 students? (7 points)

26% of respondents (1044 of 3954) answered this question correctly.

[More Details](#)

● 58	222
● 59	338
● 60	1044 ✓
● 61	2064
● 62	286



## JMC 2021 – Breakdown by Question

Rod enters a lift in a tall building. He went up 3 floors, down 5 floors, up 7 floors, and down 9 floors. He was then on the 23rd floor. On what floor did he enter the lift? (7 points)

55% of respondents (2201 of 4006) answered this question correctly.

[More Details](#)

21	209
23	174
19	1239
27	2201 ✓
25	183



What is the smallest possible number of children in a family so that each child has at least one brother and at least one sister? (7 points)

52% of respondents (2081 of 4020) answered this question correctly.

[More Details](#)

2	476
3	1122
4	2081 ✓
5	176
6	165



What is the 100th number in the sequence 1, 5, 9, 13, 17, 21, 25? (7 points)

29% of respondents (1171 of 3993) answered this question correctly.

[More Details](#)

397	1171 ✓
399	488
401	1639
403	375
405	320



How many triangles can be formed whose sides are whole numbers and have a perimeter length of 10 cm? (8 points)

15% of respondents (575 of 3814) answered this question correctly.

[More Details](#)

1	364
2	575 ✓
3	1515
4	789
5	571



## JMC 2021 – Breakdown by Question

What is the total number of squares of all sizes in the figure shown? (8 points)

53% of respondents (2106 of 3995) answered this question correctly.

[More Details](#)

● 9	98
● 10	153
● 13	1300
● 20	2106 ✓
● 22	338



The positive integers are arranged in rows as shown here. Which row has a sum nearest to 220? (8 points)

28% of respondents (1102 of 3915) answered this question correctly.

[More Details](#)

● 5th	1075
● 6th	617
● 7th	561
● 8th	560
● 9th	1102 ✓



If 5 cats catch 6 mice in 6 minutes, how many mice would be caught by 30 cats in 30 minutes? (8 points)

36% of respondents (1440 of 3963) answered this question correctly.

[More Details](#)

● 30	1275
● 180	1440 ✓
● 150	815
● 6	135
● 900	298



A computer is programmed to scan the digits of the counting numbers. For example it scans 1 2 3 4 5 6 7 8 9 10 11 12 and then it has scanned 15 digits. The computer begins its task and scans the first 1788 digits. What is the last counting number scanned? (8 points)

15% of respondents (585 of 3924) answered this question correctly.

[More Details](#)

● 533	310
● 632	585 ✓
● 645	767
● 1599	1119
● 1689	1143



## JMC 2021 – Breakdown by Question