

Powers Exam Practice



Squares, Cubes

- Q1. Write down the square root of 36
(1 mark)
- Q2. Write down the square root of 121
(1 mark)
- Q3. Work out the value of 4^3
(1 mark)
- Q4. Work out the value of 7^3
(1 mark)
- Q5. Write down the cube root of 27
(1 mark)
- Q6. Find the cube root of 8000
(1 mark)
- Q7. Write down all the square numbers from this list:
1, 4, 8, 12, 16, 20, 32, 36, 49, 66, 144, 160
(2 marks)
- Q8. Write down all the cube numbers from this list:
1, 4, 24, 36, 64, 120, 125, 216, 360, 512, 10000
(2 marks)
- Q9. Work out the next cube number after 1000
(2 marks)
- Q10. Find the next square number after 5625
(3 marks)



Powers

Q11. From the list, write down all the numbers that are powers of 2.

4, 6, 8, 11, 12, 15, 16, 25, 42, 256

(2 marks)

Q12. Write $6 \times 6 \times 6 \times 6 \times 6 \times 6$ as a power of 6

(1 mark)

Q13. Work out the value of $9^3 \times 10^2$

(1 mark)

Q14. Fern is thinking of a number.

It is larger than 30, and a square number which is also a power of 2.

What number is Fern thinking of?

(1 mark)

Q15. Work out the value of $400 \times 10^4 \times 25 \times 10^3$, giving your answer as a power of 10.

(1 mark)

Q16. A colony of ants doubles in population every 5 days.

If there were 2 ants on the first of January, how many ants would there be on January 7th?

(2 marks)

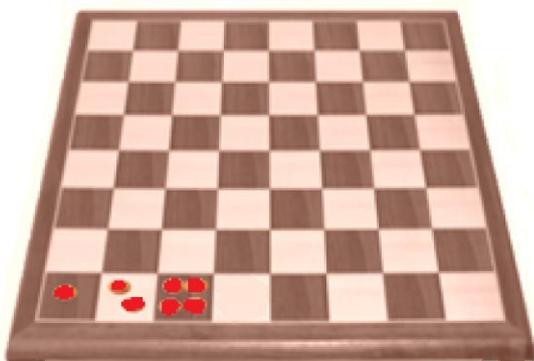
Q17. Given that $3^4 \times 312 = 25272$, work out the value of $3^5 \times 312$

(2 marks)

Q18. Given that $2^{12} = 4096$, write 8192 as a power of 2.

(1 mark)

Q19. Here is a chess board.



Jane puts 1 counter on the first square of the chess board, then 2 counters on the second, 4 on the third and so on. Work out how many counters there will be in total after she has covered the first row of the board.

(3 marks)