JRA Tutors
Private tuition and small online Study Pods

Standard Form

Grade 5 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (35 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 56 marks.

Warm-up

1 Write 980000 in standard form. **[2 marks]**

Answer _____

2 Write 0.000065 in standard form. **[2 marks]**

Answer _____

3 Write 0.0062 in standard form. **[2 marks]**

Answer _____

4 Write 1900 in standard form. **[2 marks]**

Answer _____

5 Write 8900 in standard form. **[2 marks]**

Answer _____

Core

6 Write 1.9×10^{-5} as an ordinary number. **[2 marks]**

Answer _____

7 Write 6.1×10^{7} as an ordinary number. **[2 marks]**

Answer _____

8 Write 8.8×10^6 as an ordinary number. **[2 marks]**

Answer _____

9 Write 42000 in standard form. **[2 marks]**

Answer _____

10 Write 200000000 in standard form. **[2 marks]**

Answer _____

Stretch

11 Work out $(2 \times 10^6) \times (3.1 \times 10^2)$. Give your answer in standard form. **[3 marks]**

Answer _____

12 Work out $(5.33 \times 10^9) \div (4.1 \times 10^2)$. Give your answer in standard form. **[3 marks]**

Answer _____

13 Work out $(4.1 \times 10^2) \times (1.2 \times 10^4)$. Give your answer in standard form. **[3 marks]**

Answer _____

14 Work out $(19.80 \times 10^8) \div (4.4 \times 10^4)$. Give your answer in standard form. **[3 marks]**

Answer _____

15 Work out $(4.5 \times 10^4) \times (2.7 \times 10^5)$. Give your answer in standard form. **[3 marks]**

Answer _____

Challenge

16 Work out $(1.4 \times 10^6) + (2.1 \times 10^5)$. Give your answer in standard form. **[4 marks]**

Answer _____

17 Work out $(8.8 \times 10^6) - (2 \times 10^4)$. Give your answer in standard form. **[4 marks]**

Answer _____

18 Light travels at 3×10^8 m/s. How long does it take light to travel 2.1×10^{11} m? Give your answer in standard form. **[4 marks]**

Answer _____

19 A planet has mass 5.6×10^9 kg and a moon has mass 5.6×10^6 kg. How many times heavier is the planet than the moon? **[4 marks]**

Answer _____

20 $x = 5.1 \times 10^7$ and $y = 2.3 \times 10^5$. Work out $x \div y$. Give your answer in standard form to 3 significant figures. **[5 marks]**

Answer _____