



JP Maths

Revision



Attempt the paper
before watching the
solutions!

[https://www.youtube.com/
@JPMathsRevision](https://www.youtube.com/@JPMathsRevision)



FOUNDATION / HIGHER TIER

Estimation



INSTRUCTIONS

- Use **black ink** or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.



INFORMATION

- The marks for **each** question are shown in brackets– *use this as a guide as to how much time to spend on each question.*



ADVICE

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.



You've got this! 

1. Work out an estimate for the value of 78×54

$$80 \times 50$$

$$4000$$

(Total for Question 1 is 2 marks)

2. Work out an estimate for the value of $399 \div 49$

$$400 \div 50$$

$$8$$

(Total for Question 2 is 2 marks)

3. Work out an estimate for the value of 12.3×3.9

$$12 \times 4$$

$$48$$

(Total for Question 3 is 2 marks)

4. Work out an estimate for the value of $\frac{84}{19.6}$

$$\frac{80}{20}$$

4

.....
(Total for Question 4 is 2 marks)

-
5. Work out an estimate for the value of $\frac{7.9}{0.52}$

$$\frac{8}{0.5}$$

16

.....
(Total for Question 5 is 2 marks)

-
6. Work out an estimate for the value of $\frac{48.3}{5.01}$

$$\frac{50}{5}$$

10

.....
(Total for Question 6 is 2 marks)

7. Work out an estimate for the value of $\frac{73}{2.3 + 5.2}$

$$\frac{70}{2+5}$$

10

(Total for Question 7 is 3 marks)

8. Work out an estimate for the value of $\frac{19.8 + 61.6}{7.9}$

$$\frac{20+60}{8}$$

10

(Total for Question 8 is 3 marks)

9. Work out an estimate for the value of $\frac{7.2 \times 4.9}{5.1}$

$$\frac{7 \times 5}{5}$$

7

(Total for Question 9 is 3 marks)

10. Work out an estimate for the value of $\frac{5.91^2}{2.98}$

$$\frac{6^2}{3} = \frac{36}{3}$$

12

(Total for Question 10 is 3 marks)

11. Work out an estimate for the value of $\frac{7.84 \times 15.2 + 3.91}{4.07}$

$$\frac{8 \times 20 + 4}{4} = \frac{164}{4}$$

41

(Total for Question 11 is 3 marks)

12. Work out an estimate for the value of $\frac{\sqrt{37.7}}{6.12}$

$$\frac{\sqrt{36}}{6} = 1$$

1

(Total for Question 12 is 3 marks)

13. (a) A bread roll costs £0.87 and a coffee costs £1.92. Estimate the total cost of 4 rolls and 5 coffees.

$$4 \times 0.87 \rightarrow 4 \times 0.9 = 3.60$$

$$5 \times 1.92 \rightarrow 5 \times 2 = 10$$

£13.60

(2)

- (b) Is your answer to part (a) an overestimate or an underestimate? Give reason for your answer.

Overestimate $\rightarrow$ Rounded up

(1)

(Total for Question 13 is 3 marks)

14. (a) A taxi ride costs £4.75 and a train ticket costs £18.40. Estimate the cost of 3 taxi rides and 2 train tickets.

$$3 \times 4.75 \rightarrow 3 \times 5 = 15$$

$$2 \times 18.40 \rightarrow 2 \times 20 = 40$$

£55

(2)

- (b) Is your answer to part (a) an overestimate or an underestimate? Give reason for your answer.

Overestimate $\rightarrow$ Rounded up.

(1)

(Total for Question 14 is 3 marks)

15. (a) A bag contains 9.78 kg of rice. Each serving uses 2.04 kg. Estimate how many servings can be made.

$$10 \div 2 = 5$$

5

(2)

- (b) Is your answer to part (a) an overestimate or an underestimate? Give reason for your answer.

Over estimate $\rightarrow$ Rounded bigger number by a smaller number

(1)

(Total for Question 15 is 3 marks)

16. (a) A car travels 198 km using 21.3 litres of fuel. Estimate how many kilometres the car travels per litre.

$$200 \div 20 = 10$$

(2)

- (b) Is your answer to part (a) an overestimate or an underestimate? Give reason for your answer.

Over estimate $\rightarrow$ Rounded bigger number by a smaller number

(1)

(Total for Question 16 is 3 marks)