

Name:

Exam Style Questions

## Estimation



Equipment needed: Pen, Pencil

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

Video 215



Answers and Video Solutions



1. By rounding each number to the nearest 10, estimate the value of  $39 \times 21$



.....  
(3)

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2. Estimate  $2.9 \times 401$



.....  
(2)

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3. Work out an estimate for the value of  $7.1 \times 97$



.....  
(2)

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4. Estimate the value of  $\frac{908}{2.03}$



.....  
(2)

5. Isla uses her mobile phone while abroad.



She received 3 minutes of calls at 88p per minute.  
She made 7 minutes of calls at 71p per minute.  
She sent 4 text messages at 52p per message.

Estimate the total cost of Isla using her mobile phone while abroad.

.....  
**(3)**

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6. Stuart buys 72 packets of crisps at 19p each.  
Estimate the total cost.



£.....  
**(2)**

7. By rounding each number to the nearest 10, estimate the value of  $\frac{82 \times 48}{198}$



.....  
(2)

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8. Work out an estimate for



$$\frac{58.8 \times 20.9}{101.4}$$

.....  
(3)

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9. Estimate the total cost of 31 televisions at £196.50 each and 19 DVD players at £50.99 each.



Show clearly how you obtained your answer.

.....  
(3)

10. Jack was asked to work out  $\frac{88.78 - 19.44}{9.84}$



His answer is 10.99

By rounding each number to the nearest 10, show that his answer is incorrect.

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(3)

11. Estimate



$$\frac{31 \times 398}{61}$$

Show clearly how you obtained your answer.

.....  
(3)

12. Estimate the value of  $9.03 + 19.87 \times 3.11 - 4.97$



You must show your working.

.....  
(3)

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13. Work out an estimate for



$$\frac{31.1 \times 19.4}{3.98 \times 5.04}$$

.....  
(3)

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14. Estimate the value of



$$\frac{702.1 + 299.3}{1.9 \times 5.1}$$

.....  
(3)

15. A merchandise stall sell



49 bubble wands for \$29.75 each  
196 pins for \$9.95 each

(a) Work out an estimate for the total money paid for the items.

.....  
**(3)**

(b) Is your answer to (a) an underestimate or an overestimate?  
Explain your answer.

.....  
.....  
.....  
**(1)**

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16. 1.97 litres of water flows from a tap every 15 seconds.



Estimate how many litres will flow from the tap in one hour.

.....  
**(2)**

17. Circle the number that is closest to the value of  $20.2^3$



400

800

8000

60

---

(1)

18. Work out an estimate for



$$\frac{20.2 \times 698.1}{19.8 \times 5.3}$$

.....  
(3)

19. Estimate the answer to



$$\frac{8.7 \times 20.3}{8.898 - 6.01}$$

.....  
(3)

20. In a theatre there are 29 rows and in each row there are 32 seats.  
Each ticket costs £19.75



Work out an estimate for the total income from ticket sales.

£.....  
**(3)**

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21. Estimate how many books costing \$7.05 can be bought for \$424



.....  
**(2)**

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22. By writing each number correct to 1 significant figure, use estimation to show that



$$\frac{60.4 \times 19.7}{\sqrt[3]{7.96}} \approx 600$$

**(3)**

23. Work out an estimate for



$$\frac{203 \times 9.93}{0.511}$$

.....  
**(3)**

24. Alasdair is estimating the value of  $60.4 \times 91.18$



He rounds each number to 1 significant figure.

(a) Work out Alasdair's estimate.

.....  
**(2)**

Alasdair says his estimate is an overestimate.

(b) Is Alasdair correct?  
Explain your answer.

.....  
.....  
.....  
**(1)**

25. Use approximations to estimate the value of



$$\frac{4.02^2 + \sqrt{102}}{0.51}$$

.....  
(3)

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26. Use approximations to estimate the value of



$$\frac{4.12 \times 1.89}{0.21}$$

.....  
(3)

27. Work out an estimate for



$$\frac{(5.14)^2}{0.398}$$

.....  
(3)

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28. Work out an estimate for



$$\frac{4.086 \times 2.992}{0.192}$$

.....  
(3)

29. Use approximations to estimate the value of



$$\frac{596.4 \times 2.06}{0.521}$$

.....  
(3)

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30. Write down an estimate for  $\sqrt{20}$



.....  
(1)

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31. Write down an estimate for  $\sqrt{51}$



.....  
(1)

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32. Write down an estimate for  $\sqrt{78}$



.....  
(1)

33. Write down an estimate for  $\sqrt[3]{30}$



.....  
(1)

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34. Circle the number that is closest to the value to  $\frac{79.7}{0.0206}$



40000      4000      400      40

.....  
(1)

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35. Estimate



$$\frac{594 \times 4.03}{0.396}$$

.....  
(3)

36. Use approximations to estimate the value of



$$\sqrt{\frac{50.77}{0.513}}$$

You must show your working.

.....  
(3)

37. Estimate the value of



$$\frac{803 \times 2.97}{0.613}$$

.....  
(3)