

Name:

Exam Style Questions

## Recurring Decimals



Equipment needed: Calculator, pen

### 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 96



Answers and Video Solutions



1. Shown below are four fractions.



$$\frac{5}{8} \quad \frac{1}{3} \quad \frac{2}{7} \quad \frac{11}{20}$$

Circle any fractions which are recurring decimals.

(2)

---

2. Write the fraction  $\frac{1}{6}$  as a recurring decimal.



.....  
(2)

---

3. (a) Write  $\frac{2}{3}$  as a recurring decimal.



.....  
(1)

(b) Write  $\frac{2}{30}$  as a recurring decimal.

.....  
(1)

4. Write  $\frac{4}{7}$  as a recurring decimal.



.....  
(2)

---

5. Write  $\frac{3}{11}$  as a recurring decimal.



.....  
(2)

---

6. Circle the largest number.



1.8 $\dot{5}$       1.8 $\dot{5}$       1.85      1.8

(1)

---

7. Circle the smallest number.



0. $\dot{7}$       0.7 $\dot{8}$       0.775      0.74 $\dot{9}$

(1)

8. Write the following numbers in order of size, starting with the smallest.



$0.\dot{7}0\dot{5}$

$0.70\dot{5}$

$0.705$

$0.7\dot{0}\dot{5}$

.....

**(2)**

9. Write  $0.\dot{8}\dot{1}$  as a fraction.



Give your answer in its simplest form.

.....

**(3)**

10. Convert  $0.3\dot{4}$  to a fraction.



Give your answer in its simplest form.

.....

**(3)**

11. Prove algebraically that  $0.5\dot{1}\dot{2}$  can be written as  $\frac{169}{330}$



(3)

---

12. Convert  $0.451515151\dots$  to a fraction.  
Give your answer in its simplest form.



.....  
(3)

---

13. Write  $1.2\dot{4}$  as a mixed number.  
Give your answer in its simplest form.



.....  
(3)

14. Prove algebraically that  $0.3\dot{0}\dot{9}$  can be written as  $\frac{17}{55}$



(3)

---

15. Prove algebraically that  $0.21\dot{6}$  can be written as  $\frac{13}{60}$



(3)

---

16. Write  $2.1\dot{6}\dot{5}$  as a mixed number.  
Give your answer in its simplest form.



.....  
(3)

17. Write the numbers below in order.  
Start with the smallest.



$$\frac{11}{23}$$

$$0.4\dot{7}\dot{2}$$

$$\frac{5}{11}$$

.....  
(3)

18. Work out  $0.\dot{3} - 0.0\dot{5}$



Give your answer as a fraction in its simplest form.

.....  
(4)

19. Work out  $0.1\dot{4} + 0.2\dot{3}$



Give your answer as a fraction in its simplest form.

.....  
(4)

20. Work out  $1.5\dot{4} \times 0.\dot{2}$



Give your answer as a fraction in its simplest form.

.....  
(4)



21. Work out  $0.\dot{1}\dot{8} + 0.\dot{3} \div 0.4\dot{6}$



Give your answer as a fraction in its simplest form.

.....  
(5)

---

22. Work out  $3^{-2} \div 0.\dot{2}7\dot{0}$



Give your answer as a fraction in its simplest form.

.....  
(4)