

Practice test questions for test 1

- The questions below are like the questions on the test
- The questions are broken down under the headings for each Unit
- There are about twice as many questions here as will be in the test

Unit 1 and 1: Whole number arithmetic, factors, primes

- 1) Write down the multiples of three in this list
2, 97, 51, 12, 13, 27, 81, 18, 46, 3
- 2) Which of the following numbers are prime numbers?
1, 2, 4, 7, 12, 13, 51, 91, 110
- 3) What is 315×19 ? Show a method.
- 4) Find out all the factors of 180
- 5) A carton contains 48 packets of pills. Each packet has 16 pills – and the standard dose is 4 pills per day. How many days doses can be obtained from the carton?

Unit 3: Fractions

- 6) Add $\frac{2}{5} + \frac{3}{4}$
- 7) Work out $1\frac{2}{5} - \frac{3}{8}$
- 8) Work out $\frac{4}{5} \times \frac{3}{2}$
- 9) What is $2\frac{1}{2} \div \frac{3}{4}$?

Unit 4: Decimals

- 10) Calculate the value of 15.6×7.5
- 11) What is $15.05 + 3.5 + 19 + 2.7 = ?$
- 12) The restaurant bill for 6 people comes to £125.50. If the party decide to split the bill equally, how much does *each* pay?
- 13) Work out $12.56 - 3.89$
- 14) The minimum wage is £4.85 per hour. If a shelf-stacker is paid the minimum wage and works for 14 hours one week, how much should they be paid *before* deductions?
- 15) a) Convert $1\frac{1}{2}$ to decimal form
b) Convert $3\frac{3}{8}$ to decimal form
c) What is $6\frac{3}{4}$ written as a decimal?
- 16) a) Write 1.55 as a mixed fraction in lowest terms
b) What is 17.72 written as a fraction?

Unit 5: Units of measure

- 17) How many miles is 31 Km? (hint: 5 miles is 8 Km)
- 18) You measure the drop for a set of curtains to be one yard and 10 inches. How many centimetres of cloth will you need to buy?
- 19) You need 5 500 doses of vaccine for a campaign in a small village. If each dose uses 3ml of vaccine, how many litres of vaccine will you need to order?

Unit 5a: Charts and Tables

Graduate Loan Repayment Examples

Loan Amount	£1,000	£2,000	£4,000	£7,000	£10,000
Repayment Period	48 months	48 months	48 months	48 months	48 months
Insurance Premium total *	£158.81	£317.62	£635.24	£1,111.50	£1,587.85
Total Interest	£213.51	£427.02	£854.04	£1,493.30	£2,132.95
Monthly Repayment amount **	£28.59	£57.18	£114.36	£200.10	£285.85
Total amount payable	£1,372.32	£2,744.64	£5,489.28	£9,604.80	£13,720.80
Interest rate %	0.63	0.63	0.63	0.63	0.63
APR %	7.8	7.8	7.8	7.8	7.8

Source: http://www.lloydstsb.com/rates_and_charges/

Accessed 27th Oct 2004

- 20) Use the table above to answer the following questions...
- Find the total interest payable on a £4,000 loan repaid over 48 Months
 - What is the total cost of a £2,000 loan repaid over 4 years?
 - What is the monthly repayment for a loan of £7,000 paid back over 4 years?
 - What is the total insurance premium paid on a £10,000 loan paid back over 4 years?

Unit 6: Ratio and proportion

- 21) Simplify the ratios shown as much as you can
- a) 15:5
 - b) 320:80
 - c) 4Km : 3m
 - d) 15ml : 1 Litre
 - e) 2.5 : 1.25
- 22) Fred and Mavis share their bingo winnings in the ratio 3:5. If the total winnings come to £48, what is Mavis's share?
- 23) Meldrum, Finley and McFadden is a successful doctor's practice. Their total operating costs last year were £525,000. They agreed to share costs in the ratio 2:2:1 as Dr McFadden is a junior partner. How much does Dr Meldrum have to pay?
- 24) Harjit, Rakesh and Aaron decide to split the electricity bill in their shared student house according to the number of baths they each take. The ratio comes out to be 1:3:4. If Aaron ended up paying £48, how much was the whole electricity bill?
- 25) £1 = €1.48 today. You want to change £250 to Euros for a cross-channel shopping trip. How many Euros will you get?
- 26) One pound Sterling is about 45 Czech Crowns at today's rate. If, after returning from Prague, you change 945 crowns back into Sterling, how much do you receive?
- 27) It takes 5 teachers 4 days to finish a 100g jar of coffee. How long will it take 8 teachers to use up a 300g jar of coffee of the same strength?

Units 7 and 8: Percentages

- 28) Myfanwy has £2,500 in a building society account that is paying 3% interest each year. How much interest does she receive in one year?
- 29) Hartinder puts £600 in a savings account and at the end of a full year he is paid £24 in interest. What percentage interest rate is Hartinder getting on this account?
- 30) A scientific calculator is normally sold for £5. If the calculator is marked as 'reduced by 25%' in a sale, how much would it cost in the sale?
- 31) Convert the percentages below to fractions in their lowest terms...
- a) 165% b) 75% c) 15%
- 32) Put the following numbers in increasing order of size...
- $\frac{3}{4}$ 72% 0.77 $\frac{11}{16}$ 0.69 0.075
- 33) Find 17.5% of £450
- 34) Find 40% of 8500
- 35) Brian earns £245 a week. He saves 30% of his wages each week to add to his collection of Russian lacquer work. How much does Brian save each week?
- 36) A laptop computer is reduced in price from £600 to £540. What was the percentage reduction in price?
- 37) The value of a new combine harvester depreciates in value by 25% each year. If the combine harvester cost £125,000, how much does it decrease in value in the first year?
- 38) If Mr Scroggins earns £17 500 pa and is awarded a 5% pay rise, calculate his new salary

Unit 9: Approximation

- 39) Mafanwy decides to make a presentation to communicate her latest findings. She needs to round the following numbers to the nearest 1,000...
- a) 524, 956 b) 72, 104 c) 501
- 40) Round the following numbers to **two decimal places** (2dp) each...
- a) 19.57923 b) 0.71934 c) 104.375
- 41) Round the following numbers to **three significant figures** (3sf) each...
- a) 19.57923 b) 0.71934 c) 104.375

Unit 10: Easy probability

- 42) What is the probability of throwing a 6 on a fair die?
- 43) What is the chance of **not** throwing a 5 on a fair die?
- 44) Suppose you devised a game where the scores on two dice were multiplied together instead of being added. Complete **the possibility space diagram** for this game...

×	1	2	3	4	5	6
1	1					
2		4				
3			9			18
4						
5						
6						36

What is the total probability of scoring 24 or more when you roll the two dice?