



# Test 6

There are **7 questions** in this test. Give yourself **10 minutes** to answer them all.  
You may use a calculator for this test.



1. Which of the following is **not** equivalent to  $\frac{11}{4}$ ? Circle your answer.

2.75

$2\frac{3}{4}$

3.25

$\frac{33}{12}$

[1]

2. Circle the statement below which is **true**.

All even numbers have an even number of factors.

All square numbers have an odd number of factors.

All cube numbers have an odd number of factors.

Two prime numbers will have no common factors.

[1]

3. Marco has the five number cards shown on the right.  
What is the largest possible 4-digit number he can make?



.....  
[1]

4. By rounding each number to one significant figure, find an estimate for the calculation below.  
Show all your working.

$$\frac{9.8^2 + 76.24}{12 \times 3.06}$$

5. The numbers below are written in standard form. Put the numbers in order, from largest to smallest. Leave your answers in standard form.

$5.14 \times 10^{-4}$

$5.08 \times 10^{-3}$

$3.14 \times 10^4$

$8.29 \times 10^{-5}$

..... [2]


6. The sum of every row and column in the grid below should be the same. Find the value of A.

16	-13	9
A	B	0
C	32	D

A = ..... [2]

7. Ruby runs a restaurant. She needs to buy watermelons and pineapples to make a tropical fruit starter. Her supplier has the following offers:  
Ruby needs to buy 12 watermelons and 18 pineapples. How much will she spend in total?

**Watermelons**



£2.25 each  
Buy one get one free

**Pineapples**



£1.50 each  
Four for the price of three

£ ..... [3]

3. 8653 [1 mark]

4.  $\frac{9.8^2 + 76.24}{12 \times 3.06} \approx \frac{10^2 + 80}{10 \times 3}$   
 $= \frac{100 + 80}{30} = \frac{180}{30} = 6$

[1 mark for rounding correctly,  
1 mark for a correct estimate]

5. Order by the powers of 10:

$3.14 \times 10^4, 5.08 \times 10^{-3}, 5.14 \times 10^{-4},$   
 $8.29 \times 10^{-5}$

[2 marks for fully correct order,  
otherwise 1 mark for correct highest  
and lowest values]

6.  $16 + (-13) + 9 = 12$ , so each row and  
column must add up to 12.

$B = 12 - (-13) - 32 = -7$

So  $A = 12 - (-7) - 0 = 19$

[1 mark for a correct method,  
1 mark for the correct value of A]

7. Watermelons are buy one get one  
free, so £2.25 will get her two  
watermelons. So 12 watermelons  
will cost  $6 \times £2.25 = £13.50$

[1 mark]. Four pineapples cost  
 $3 \times £1.50 = £4.50$ , so 18 ( $4 \times 4 + 2$ )  
pineapples will cost

$(4 \times £4.50) + (2 \times £1.50) = £21$

[1 mark]. So Ruby spends  
 $£13.50 + £21 = £34.50$  [1 mark].

### Test 6 — Pages 12–13

1. 3.25 [1 mark]

2. All square numbers have an odd  
number of factors [1 mark].