mgs Founded 1515 | The Manchester Grammar School

Candidate no.: .....

ENTRANCE EXAMINATION 2010

PART 1 ARITHMETIC EXAMINATION

Time available: 30 minutes

Surname: .....

First Name(s): .....

School: .....

There are 20 questions in this paper and each question is worth one mark. Work through the questions in the order in which they appear. The questions toward the end of the paper are not necessarily the most difficult. Do attempt the questions on both pages.

All answers must be written clearly in the answer-spaces provided. If an answer cannot be read easily it may be marked wrong.

Instead of leaving blank answer-spaces, you should use any available time at the end of the examination to make the best attempt you can at questions you have not done.

You may use rough paper; this will not be marked.

Calculators must not be used.

	Marker 1	Marker 2
Total number of ticks		
Total number of crosses		
	Check total is 20 and initial here	Check total is 20 and initial here

1. Work out $186 + 375$.

1 _____

2. Work out 294×70.

2 _____

3. Work out $525 \div 25$.

3 _____

4. What is the difference between the product of 4 and 11 and the difference of 4 and 11?

4 _____

5. One angle of a triangle is 30°. The second angle is twice the size of the third. What is the largest angle?

5 _____ °

6. Neil lends Rodger £4. Rodger pays back 30% of this the next day. How much does he still owe Neil?

6 _____

7. In an arithmetic test, 4 marks were given for each correct answer and a mark was deducted for each wrong answer. Tim got 17 questions right and 3 questions wrong. How many marks did he obtain?

7 _____

8. Nigel spent £71 on CDs, some costing £8 each, and the rest £5 each. He bought more of the dearer ones. How many CDs did he buy altogether?

8 _____

9. Adam ran 3 kilometres in 13 minutes. Jackie started 30 seconds after him and finished 30 seconds before him. What was Jackie's speed in kilometres per hour?

9 _____

10. What is the largest number less than 100 which is a multiple of 2, and of 3, and also of 5?

10 _____

11. Write 0·65 as a fraction in its simplest form.

11 _____

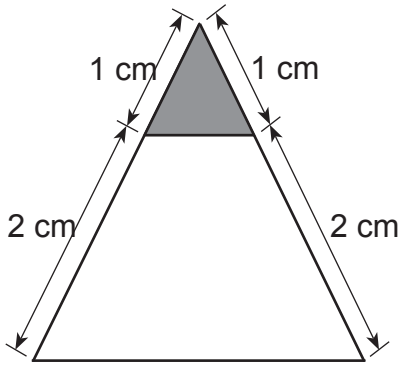
12. Geraint starts from 3 and counts up in fours, so he says 3, 7, 11,…. and so on. David starts from 6 and counts up in sevens. What is the smallest number that both boys say?

12 _____

13. 1 cm on a map represents a distance of 2 km on the ground. What is the distance in metres represented on the ground by 3 mm on the map?

13 _____ m

14. What fraction of the area of the triangle has been shaded?



14 _____

15. 1 foot is equal to 12 inches. Paul tiles a wall which is 10 feet long and 6 feet high. He uses square tiles which are 8 inches long on each side. How many tiles does he need to tile the wall?

15 _____

16. A sum of 90 pence is made up of equal numbers of 1p coins, 2p coins, 5p coins and 10p coins. How many coins are there in total?

16 _____

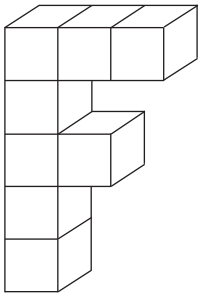
17. If these numbers are arranged in numerical order, which one will be in the middle? 0·77, $\frac{3}{4}$, 0·705, $\frac{4}{5}$, 0·748.

17 _____

18. How many different four digit numbers can be made from the digits 2, 2, 2, 3 and 3?

18 _____

19. Daniel has eight cubes, each of side 1 cm. He glues them together to make the letter F, which he then paints. What area is covered with paint?



19 _____ cm^2

20. A bull and three cows costs £1300. Four bulls and eight cows cost £4000. What is the cost of a bull?

20 £ _____