

# Core Maths Skills Assessment

## Introduction

This assessment is designed to highlight whether children in year five have any issues with their times tables or four operations skills. Without absolutely immaculate skills in these areas children can struggle to work both quickly and accurately enough in an 11 Plus Exam environment. This test should be taken at the beginning of year 5.

Many parents move to testing during 11 Plus preparation far too early and after doing a few papers find that scores have reached a plateau. Very often the reason for this is that children are making times table errors, or are not able to do them quickly enough, or are making errors with four operations calculations. These problems are very difficult to fix at the end of a preparation process.

We hope this assessment will help parents see where their children are at and will highlight any need to work on both times tables and four operations skills at the start of a year five 11 plus exam preparation process.

**Children without excellent times tables and four operations skills cannot do themselves justice in an 11 Plus exam.**

## Information about the test

This test has been used with thousands of children and is designed specifically to reveal faults in an individual child's times tables knowledge or four operations skills. The test is relevant for children at the beginning of year five.

Most of the questions have been designed around the area of the times tables that most children of this age struggle with - inter-relationships between 6,7,8 and 9. The assessment looks at the basics (e.g.  $6 \times 7$ ) but also if a child has extended their skills. (e.g. 4200 divided by 6).

Some of the four operations questions are not times tables focused. These concentrate on the core problem area of carrying figures. Where children make mistakes in the four operations it is more often than not because they forget to carry figures. To a lesser extent children also make reading errors when they have a series of questions (e.g. adding when they should be taking away).

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### Instructions

- Children can use a piece of rough paper to work out if they wish
- No calculators
- No parental help on individual questions
- Maximum time allowance 10 Minutes (including checking)

1/	$54p - 18p =$	_____ p
2/	$9 + 9 + 9 + 9 + 9 + 9 =$	_____
3/	$237 - 49 =$	_____
4/	$40\text{cm} + 16\text{cm} =$	_____ cm
5/	$9g \times 8 =$	_____ g
6/	$49 - 28 =$	_____
7/	$8 + 8 + 8 + 8 =$	_____
8/	$56p \div 7 =$	_____ p
9/	$6 \times 6 =$	_____
10/	$732 + 129 =$	_____
11/	$63g \div 9 =$	_____ g
12/	$6 + 6 + 6 + 6 + 6 + 6 + 6 =$	_____
13/	$156 - 61 =$	_____
14/	$7 \times 60 =$	_____
15/	$8100 \div 90 =$	_____
16/	$9 \times 7 =$	_____
17/	$63g - 45g =$	_____ g
18/	$5600 \div 70 =$	_____
19/	$27\text{cm} + 36\text{cm} =$	_____ cm
20/	$6 \times 5 =$	_____
21/	$749 - 167 =$	_____
22/	$72 \div 9 =$	_____
23/	$36 + 54 =$	_____
24/	$49p \div 7 =$	_____ p
25/	$72g - 24g =$	_____ g
26/	$900 \times 6 =$	_____

27/	$7 \times 8 =$	_____
28/	$48p - 36p =$	_____ p
29/	$8g \times 8 =$	_____ g
30/	$720 \div 12 =$	_____
31/	$42p \div 6 =$	_____ p
32/	$14\text{cm} + 42\text{cm} =$	_____ cm
33/	$6300 \div 9 =$	_____
34/	$7 \times 7 =$	_____
35/	$60\text{cm} - 18\text{cm} =$	_____ cm
36/	$800 \times 9 =$	_____
37/	$81 \div 9 =$	_____
38/	$7 + 7 + 7 + 7 + 7 + 7 =$	_____
39/	$81 - 63 =$	_____
40/	$856 + 49 =$	_____
41/	$64 \div 8 =$	_____
42/	$818 - 239 =$	_____
43/	$21p + 28p =$	_____ p
44/	$36 \div 6 =$	_____
45/	$42\text{cm} - 28\text{cm} =$	_____ cm
46/	$12 + 36 =$	_____
47/	$420 \div 7 =$	_____
48/	$36 - 18 =$	_____
49/	$8\text{cm} \times 6 =$	_____ cm
50/	$9 \times 9 =$	_____
51/	$54g \div 6 =$	_____ g
52/	$64p - 16p =$	_____ p

## Assessing your child's results

To assess your child's score firstly mark the questions as correct or incorrect using the answer sheet. If in doubt, because the answer is not written clearly, then mark as incorrect.

Remember that the purpose of this test is simply to indicate where skills could be improved. We know that very few children score full marks in this test **when it is taken at the beginning of year five**. It is a fact that the vast majority of children could improve their times tables and four operations skills and that this will have an important impact on how they do at the end when they take an 11 Plus exam.

- **Child ran out of time or struggled for time.**

This would indicate a core weakness in their times tables. The answer to most of these questions should be instantaneous once a child has realised that all that is really being asked is  $6 \times 7$  or 42 divided by 7.

- **Child who has used rough paper to work out answers for questions which were simple times tables questions.**

This indicates a child's times tables may not be strong enough or a child may not be confident enough in them. Children should instantly know the answers to these questions and shouldn't need to use rough paper to work out the answers.

- **Child made carrying errors or reading errors on four operations questions.** Most children of this age make mistakes and all it indicates is a need to focus on accuracy as you go through preparation. There is a difference between these errors and a child actually struggling with what to do. Where they are genuinely struggling with four operations then it is pointless embarking on 11 Plus preparation before that problem is resolved.

### Mark assessment -adjustment for age

As this test is designed to reveal where some children may have a weakness and may benefit from further work we wouldn't want parents to read too much into the results. There's no reason why a child with a low score in this test shouldn't go on to score well in an 11 Plus test if they have worked to make their core skills much stronger during the intervening period. Having

said that, to make some allowance for age differences, any child born September to November should have two marks deducted from their score, any child born December to January should have one mark deducted from their score, any child born May to August should have two marks added to their score, any child born March to April should have one mark added to their score.

## What the adjusted scores mean

**Score 50-52+** Child is at the top end of the performance range. It is likely that their knowledge of times tables and the four operations is very sound and they just need to make sure they continue to focus on attention to detail as their skills develop.

**Score 45-49-** Child has a good knowledge of times tables and four operations. Their knowledge is good enough to allow them to work quickly through the questions without making too many mistakes. While some children will have made some errors, one cannot expect all children to be entirely error free at this age. Attention to detail can be developed through the preparation process.

**Score 38-45-** Children have a base of knowledge but times tables and four operations work should be a specific feature of their early preparation. Unless children improve in this area they will continue to drop easy marks and will not do themselves justice. A focus in the early months of year five on times tables and four operations will really help.

**Score less than 38.** This indicates children have a long way to go to develop their core skills to an acceptable standard. There's absolutely no point in moving onto more complicated maths until the core skills problem has been fixed. Without attention, children will be building their maths knowledge on weak foundations. This will hold back their performance not only in 11 Plus tests but throughout their education.

## ANSWERS

1/	36p	27/	56
2/	54	28/	12p
3/	188	29/	64g
4/	56cm	30/	60
5/	72g	31/	7p
6/	21	32/	56cm
7/	32	33/	700
8/	8p	34/	49
9/	36	35/	42cm
10/	861	36/	7200
11/	7g	37/	9
12/	42	38/	42
13/	95	39/	18
14/	420	40/	905
15/	90	41/	8
16/	63	42/	579
17/	18g	43/	49p
18/	80	44/	6
19/	63cm	45/	14cm
20/	30	46/	48
21/	582	47/	60
22/	8	48/	18
23/	90	49/	48cm
24/	7p	50/	81
25/	48g	51/	9g
26/	5400	52/	48p

N.B. Remember the function of this assessment is simply to indicate where a child might have a weakness in their times tables or four operations skills. Most tutors will start preparation in year five with some fairly intensive work in this area to ensure children move forward from a sound base. If you are preparing at home, regardless of your child's score in the assessment we'd suggest that doing some regular work in these areas and focussing on accuracy will help children perform to their ability.