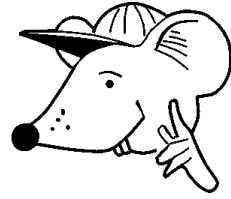


MATHEMATICS



NCT Practice Paper No: 2

Key Stage 2

Levels 3 - 5

Test B

Calculator Allowed

MathSphere

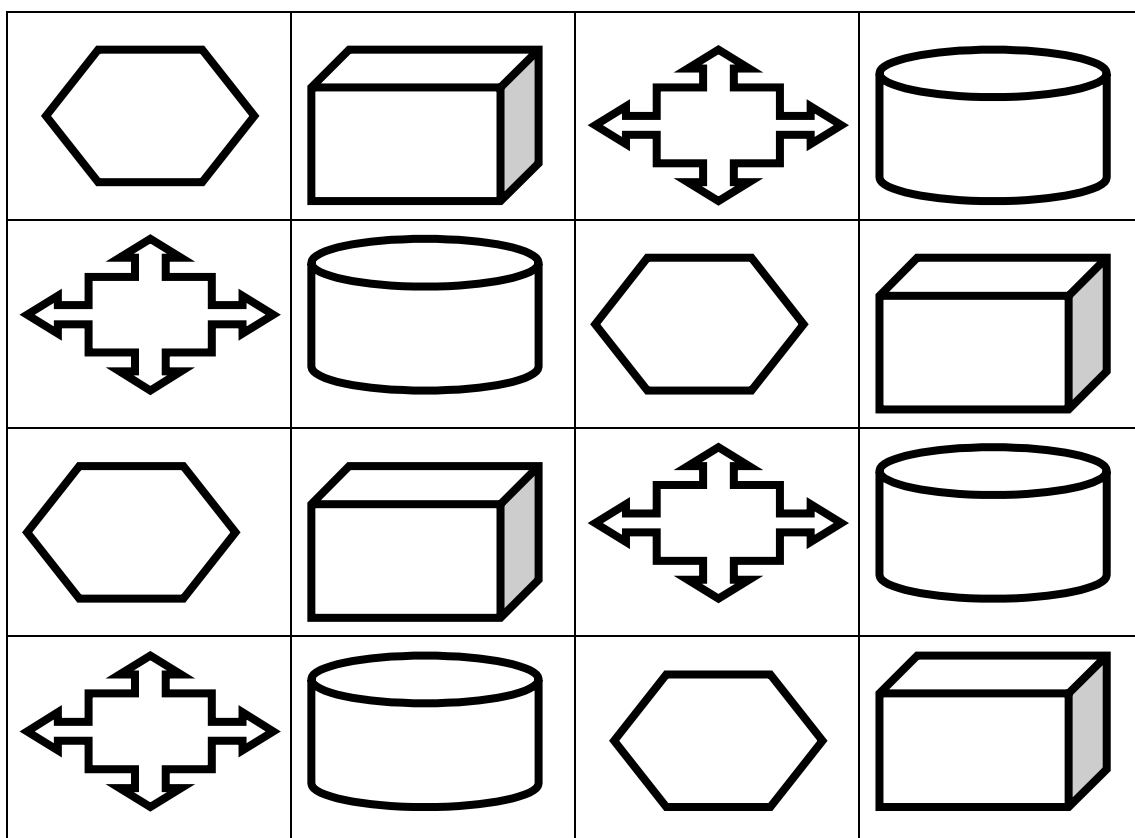
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MATHEMATICS

Key Stage 2

TEST B Levels 3 - 5**Calculator Allowed**

Page	Marks	Page	Marks
4		10	
5		11	
6		12	
7		13	
8		14	
9			
TOTAL			

**First Name****Last Name****Name of School**

INSTRUCTIONS

If you wish you **may** use a calculator to answer the questions.

Always work as quickly as you can.


Do not waste time on one question. Go on to another question if you find one difficult.

Always check your work if you have time at the end.

Time allowed for this test: **45 minutes.**

A large box like this means you must show your working:

Show your working



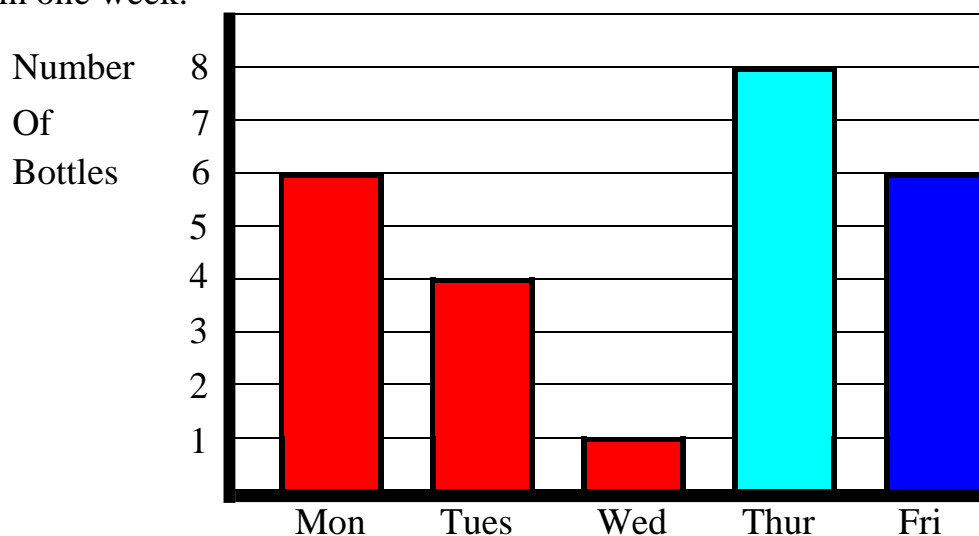
1. Write what the **three missing numbers** might be.

$$\boxed{} + \boxed{} + \boxed{} = 90$$

2. Fill in some **missing numbers** here to make this true.

$$75 + \boxed{} - \boxed{} = 75$$

3. This graph shows how many bottles of milk Mrs Jones had each day in one week.



On which day did Mrs Jones have most milk?

If milk costs 45p a pint, how much did Mrs Jones have to pay for her milk on Tuesday?

4. One of the events in a school sports day was '**The Big Press-Up Competition**' in which pupils had to do as many press-ups in one minute as they could. They received points depending on how many they could do:

The Big Press-Up Competition	
Over 10	2 points
Over 20	4 points
Over 30	6 points
Over 40	8 points
Over 50	10 points

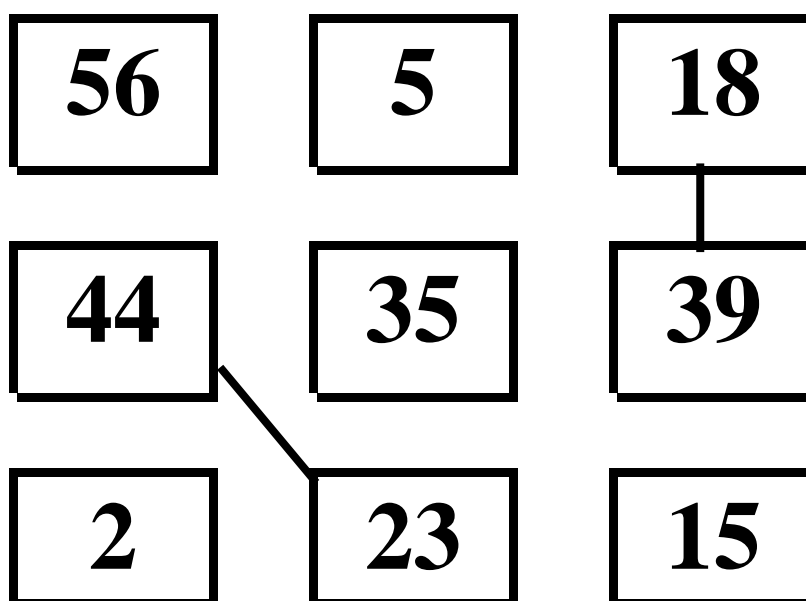
Mary did 23 press-ups. How many points did she get?

Harry said that he managed 43 press-ups, so he should get 8 points.

Explain why Harry was right.

5. In the diagram numbers are joined together if they have a **difference of 21**.

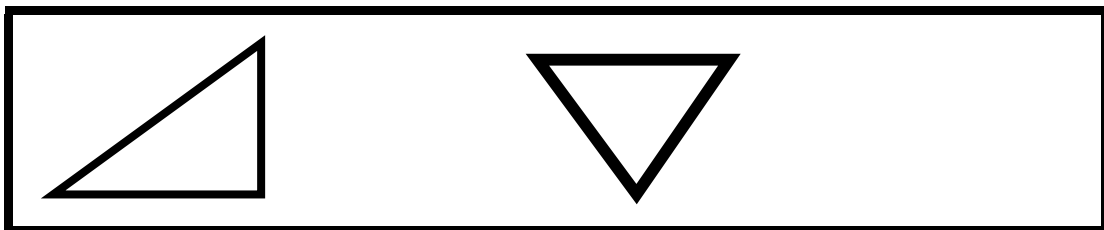
Join another pair of numbers that have a **difference of 21**.



6. Joshua holds a card in front of a mirror. The card has this pattern on it.



Draw what he sees in the mirror. Some of it has been done for you.



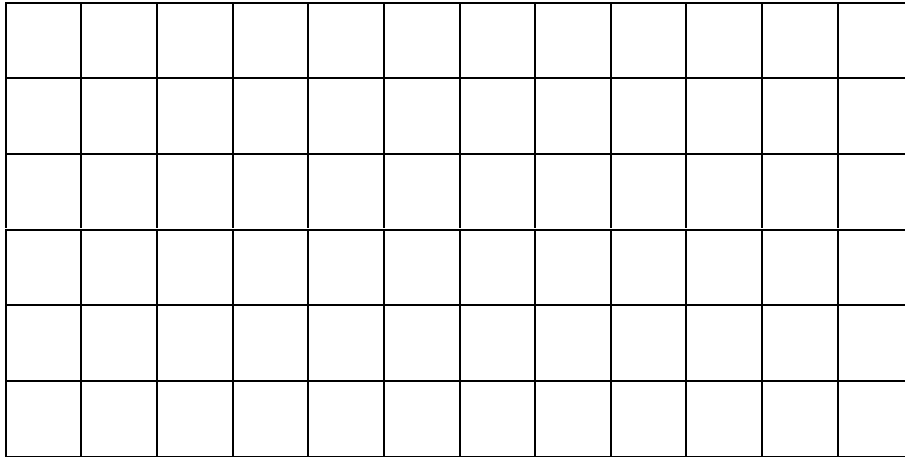
7.



Every week Michelle cleans her parents' car and they pay her £4.70.
How much does she earn cleaning this car in 48 weeks?

Show your working

9. Draw a **quadrilateral** on the grid. It must have **two right angles** and two angles which are **not right angles**.



10. Here is a sequence of numbers. The rule is:

'multiply by 3 and then add 2'.

Put the **next number** in the box.

3 \Rightarrow **11** \Rightarrow **35** \Rightarrow

What is the rule for this sequence?

3 \Rightarrow **12** \Rightarrow **39** \Rightarrow **120**

11. What number multiplied by itself equals **576**?

12. Put the **same number in each box** to make this statement true.

$$\boxed{} \div \boxed{} + \boxed{} = 10$$

13. Put in the missing digit.

$$\begin{array}{r} 8\boxed{} \\ \times \quad 7 \\ \hline 588 \end{array}$$

14. Here is a sequence of star patterns.



Pattern 1



Pattern 2



Pattern 3



Pattern 4

How many stars are there in **pattern 4**?

How many stars will there be in **pattern 12**?

If **n** is the number of the pattern, how many stars will there be in **pattern n** ?

15. Here are the masses of 8 pupils in a class group in kilograms:

34.8 36.9 40.1 32.1 37.9 37.3 34.4 39.7

What is the **mean** (average) mass?

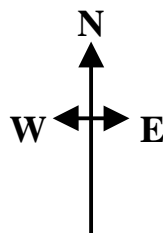
Show your working

What is the **largest** mass?

What is the **smallest** mass?

What is the **range** of masses?

16.

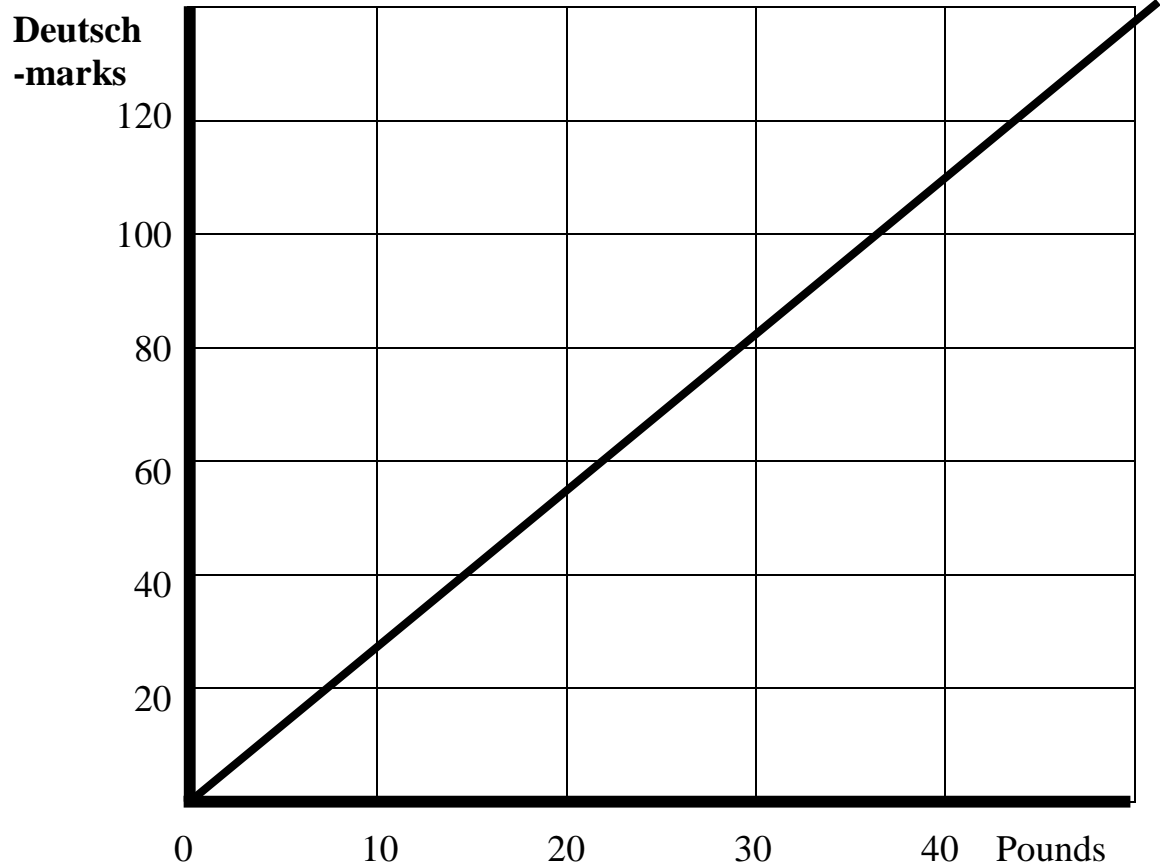


X •

Starting at the dot next to **X**, draw a line **5.2 cm long east**. Join onto the end a line **4.5 cm south**. Join onto the end of this a line **2.6 cm west**.

How far is it from **the dot** to the **end of the third line**?

17. This graph shows how to convert **pounds** to **deutschmarks** (German money).



Approximately how many deutschmarks could you get for 40 pounds?
Give your answer to the nearest 10 deutschmarks.

Use this answer to calculate how many **deutschmarks** you could get for **one pound**.

Show your working

18. Write numbers in the empty boxes to give a fraction that is **equivalent** to $\frac{3}{4}$.

$$\frac{3}{4} = \frac{\boxed{}}{\boxed{}}$$

Put these fractions in order of size with the **smallest first**.

$$\frac{4}{5} \quad \frac{1}{3} \quad \frac{1}{2} \quad \frac{1}{5}$$

What is **three-quarters** of **56 dollars**?

Show your working

19. Mrs Roberts packs lunches for the pupils in her class. In every pack she puts 2 chocolate biscuits and 3 sandwiches. Altogether she uses 96 sandwiches. How many chocolate biscuits does she use?

Show your working

20. A taxi driver charges 50p a mile plus 95p for each journey.

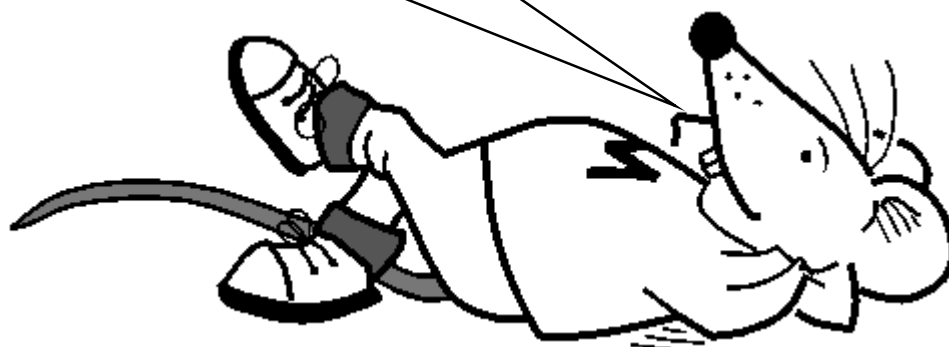
Write a formula for the **complete cost of a journey** .

m is the number of miles.

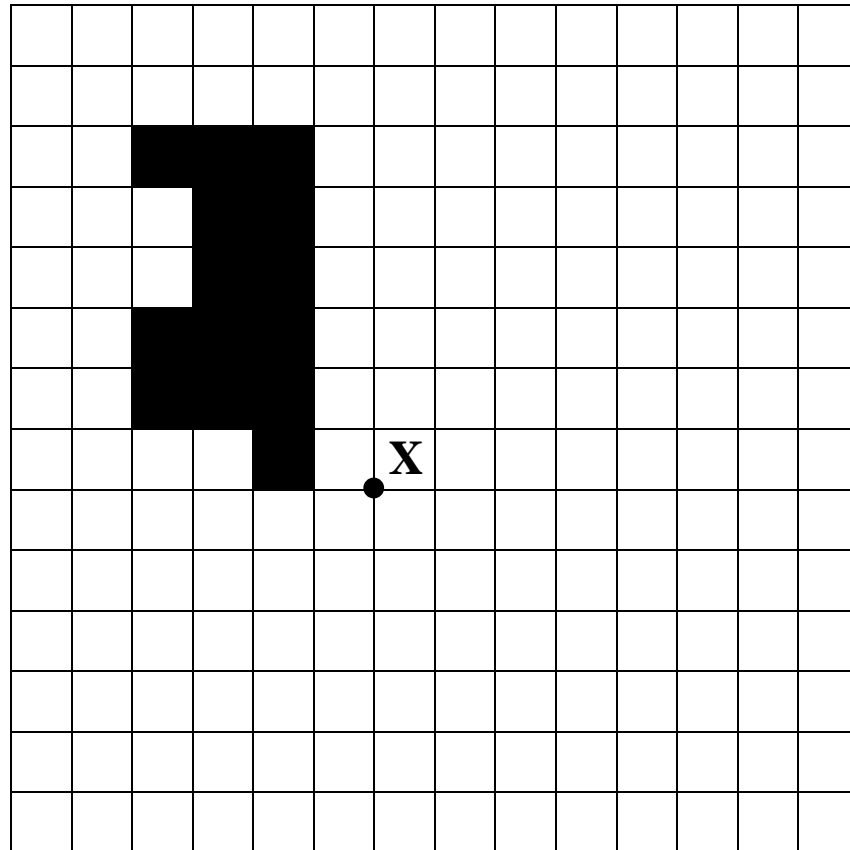
C is the complete cost **in pence**.

C =

Not quite time to relax yet, old bean!



21.



Rotate the black shape **180°** about the point **X**. Draw the new shape on the grid.


You may use tracing paper or an angle measurer if you wish.

End of Test.



Now check your work carefully,
please!

Answers

Answer	Mark	Answer	Mark
1. Any three numbers totalling 90.	1	12. 9 in each box	1
2. Two numbers of the same value	1	13. 4	1
3. a) Thursday (accept Thur) b) £1.80 or 180p	1 2	14. a) 16 b) 144 c) n^2 or $n \times n$	1 1 1
4. a) 4 b) He did more than 40, but he did not do more than 50, so he was not good enough for 10 points.	1 2	15. a) Showing total is 293.2 Dividing by 8 Answer of 36.65 Kg (units not necessary) b) Largest mass 40.1 Kg c) Smallest mass 32.1 Kg d) Range 8.0 Kg	1 1 1 1 1 1
5. 56 with 35 OR 2 with 23	1	16. a) For each correct line b) 5.1 cm (± 0.3 cm)	1 1 1 1
6. 	1 1	17. a) 110 deutschmarks b) Showing $110 \div 40$ Answer 2.75	1 1 1
7. 4.70×48 Answer = £225.60 (units not necessary)	1 1	18. a) Any fraction equivalent to $\frac{3}{4}$ b) $\frac{1}{5}$ $\frac{1}{3}$ $\frac{1}{2}$ $\frac{4}{5}$ c) $56 \div 4 = 14$ 14×3 Answer 42 dollars (units not necessary)	1 1 1 1 1
8. a) Laura's shape covers 8 squares, but Ken's covers only 7 squares. b) Any shape with 8 squares	1 1	19. $96 \div 3 = 32$ 32×2 Correct answer of 64	1 1 1
9. Any quadrilateral Quadrilateral with 2 right angles	1 1	20. $C = 50m + 95$ or equivalent	2
10. a) 107 b) Multiply by 3 and add 3	1 1	21. Correct position Correct orientation	1 1
11. 24	1	TOTAL	50