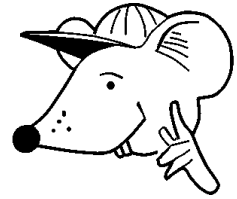


MATHEMATICS



N.S. Yr. 4 P.38

**Know, with rapid recall
addition and subtraction facts.**

Equipment

Paper, pencil, ruler
0 - 9 cards
Stop clock

MathSphere

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Concepts

It is vitally important that if children are going to go on and be confident in their mathematics then they need to know, and have a very rapid recall of, addition and subtraction facts to twenty.

By rapid recall we mean almost instant - as quickly as answering your name!

If this is to happen children must meet quick calculations every day. They will enjoy the challenge and the success that they meet as their replies get quicker and quicker.

These calculations can be presented in many ways, but some sets of 0 to 9 cards are very useful, both as a teaching resource and for the child to use to answer with. For example two cards can be held up and the child can add or subtract them and call out the answer. If the child has the cards they can be asked to show the answer by holding out two cards
eg $8 + 7 = 15$ the child holds up the 1 and 5 cards.

A set of 0 to 9 cards can be found at the end of this module. It is suggested that they are printed onto card.

Once number facts to 20 are known they can be extended to related facts such as 60 plus 50 or even 600 plus 500.

Halving is a very powerful way of calculating. At this age children are expected to be able to double and half two digit numbers quickly.


They are also expected to be able to add multiples of ten and a hundred in their head eg $280 + 280 = 560$

The sheets in this section are initial starter ideas - most of this kind of work can be done instantly without paperwork!!

Blank number squares etc are found at the end of this module.


Know by heart addition and subtraction facts to 20

Answer one set of questions below as quickly as you can. Time yourself using a stop clock.
On the next set see if you can beat your time.. and then the next... and the next.

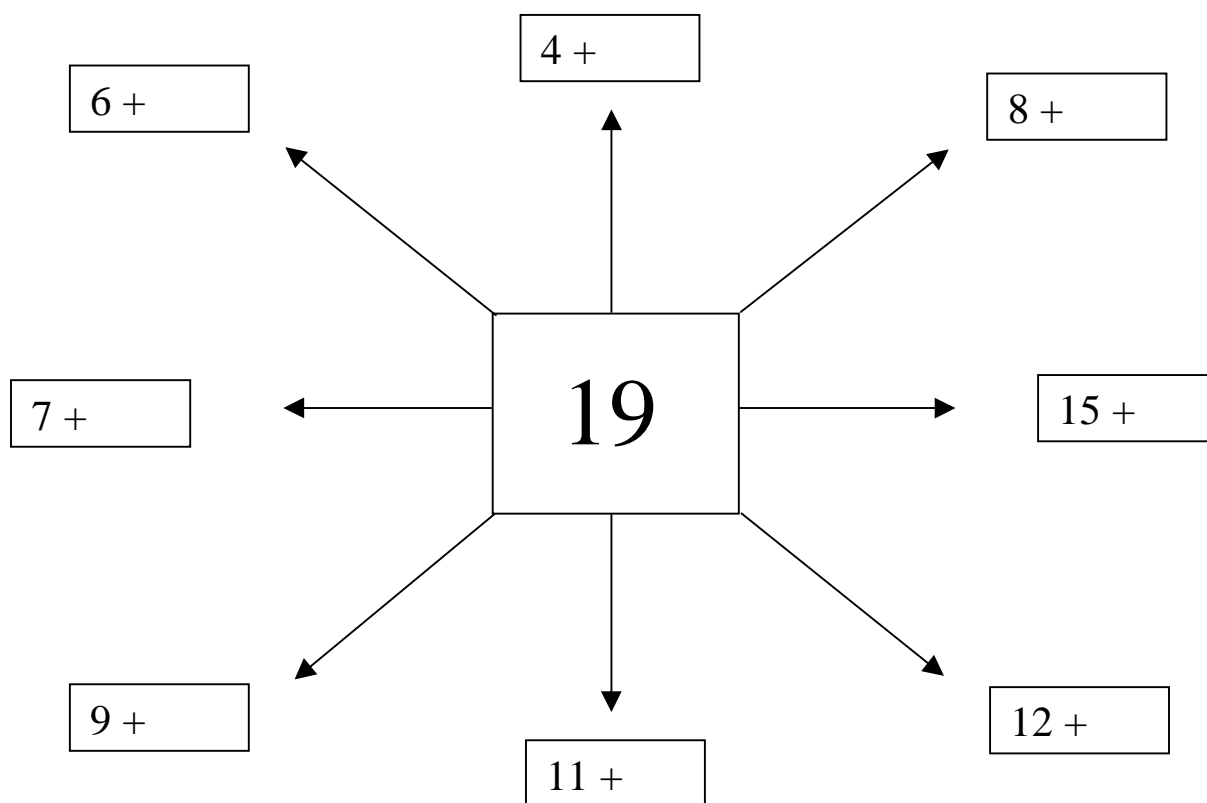
A 1. $6 + 4 =$ 2. $5 + 3 =$ 3. $7 + 2 =$ 4. $1 + 9 =$ 5. $8 + 8 =$ 6. $9 + 4 =$ 7. $3 + 8 =$ 8. $7 + 6 =$ Time: secs	B 1. $5 + 5 =$ 2. $4 + 4 =$ 3. $8 + 3 =$ 4. $2 + 7 =$ 5. $9 + 5 =$ 6. $8 + 7 =$ 7. $6 + 5 =$ 8. $7 + 9 =$ Time: secs	C 1. $10 + 4 =$ 2. $3 + 3 =$ 3. $6 + 6 =$ 4. $9 + 1 =$ 5. $4 + 8 =$ 6. $7 + 5 =$ 7. $5 + 9 =$ 8. $8 + 9 =$ Time: secs	D 1. $6 + 2 =$ 2. $7 + 3 =$ 3. $7 + 7 =$ 4. $5 + 4 =$ 5. $1 + 5 =$ 6. $8 + 8 =$ 7. $9 + 6 =$ 8. $4 + 9 =$ Time: secs
E 1. $2 + 5 =$ 2. $6 + 3 =$ 3. $6 + 6 =$ 4. $10 + 4 =$ 5. $6 + 5 =$ 6. $3 + 8 =$ 7. $8 + 8 =$ 8. $6 + 9 =$ Time: secs	F 1. $6 + 1 =$ 2. $4 + 3 =$ 3. $3 + 5 =$ 4. $4 + 4 =$ 5. $8 + 5 =$ 6. $3 + 9 =$ 7. $7 + 7 =$ 8. $7 + 8 =$ Time: secs	G 1. $10 + 5 =$ 2. $3 + 7 =$ 3. $2 + 9 =$ 4. $9 + 9 =$ 5. $5 + 4 =$ 6. $6 + 8 =$ 7. $8 + 4 =$ 8. $9 + 8 =$ Time: secs	 <div> <p>I think 30 secs would be an amazing time!</p> </div>

Know by heart addition and subtraction facts to 20

Answer one set of questions below as quickly as you can. Time yourself using a stop clock.
On the next set see if you can beat your time.. and then the next... and the next.

A 1. $7 + 3 =$ 2. $6 + 4 =$ 3. $8 + 1 =$ 4. $2 + 9 =$ 5. $9 + 6 =$ 6. $8 + 7 =$ 7. $4 + 9 =$ 8. $8 + 5 =$ Time: secs	B 1. $6 + 1 =$ 2. $5 + 2 =$ 3. $9 + 3 =$ 4. $3 + 7 =$ 5. $1 + 9 =$ 6. $9 + 8 =$ 7. $7 + 9 =$ 8. $8 + 8 =$ Time: secs	C 1. $6 + 4 =$ 2. $4 + 2 =$ 3. $10 + 2 =$ 4. $8 + 3 =$ 5. $3 + 9 =$ 6. $6 + 7 =$ 7. $4 + 9 =$ 8. $7 + 9 =$ Time: secs	D 1. $5 + 3 =$ 2. $6 + 4 =$ 3. $6 + 8 =$ 4. $4 + 5 =$ 5. $1 + 9 =$ 6. $7 + 7 =$ 7. $8 + 7 =$ 8. $3 + 8 =$ Time: secs
E 1. $1 + 4 =$ 2. $5 + 2 =$ 3. $5 + 5 =$ 4. $10 + 9 =$ 5. $4 + 7 =$ 6. $8 + 8 =$ 7. $7 + 9 =$ 8. $5 + 8 =$ Time: secs	F 1. $8 + 2 =$ 2. $7 + 2 =$ 3. $6 + 4 =$ 4. $7 + 5 =$ 5. $1 + 9 =$ 6. $10 + 6 =$ 7. $9 + 9 =$ 8. $8 + 7 =$ Time: secs	G 1. $9 + 1 =$ 2. $2 + 8 =$ 3. $1 + 7 =$ 4. $8 + 4 =$ 5. $4 + 7 =$ 6. $7 + 7 =$ 7. $9 + 6 =$ 8. $7 + 8 =$ Time: secs	 <div> <p>Which numbers are easiest to add?</p> </div>

1. Put in the missing numbers that make each of the sums in the boxes add up to 19:



2. Write down all the pairs of numbers with a total of 19:

Eg $1 + 18$

3. How many different pairs of numbers with a total of 19 are there?

4. $19 - 5 =$

5. $19 - 7 =$

6. $19 - 8 =$

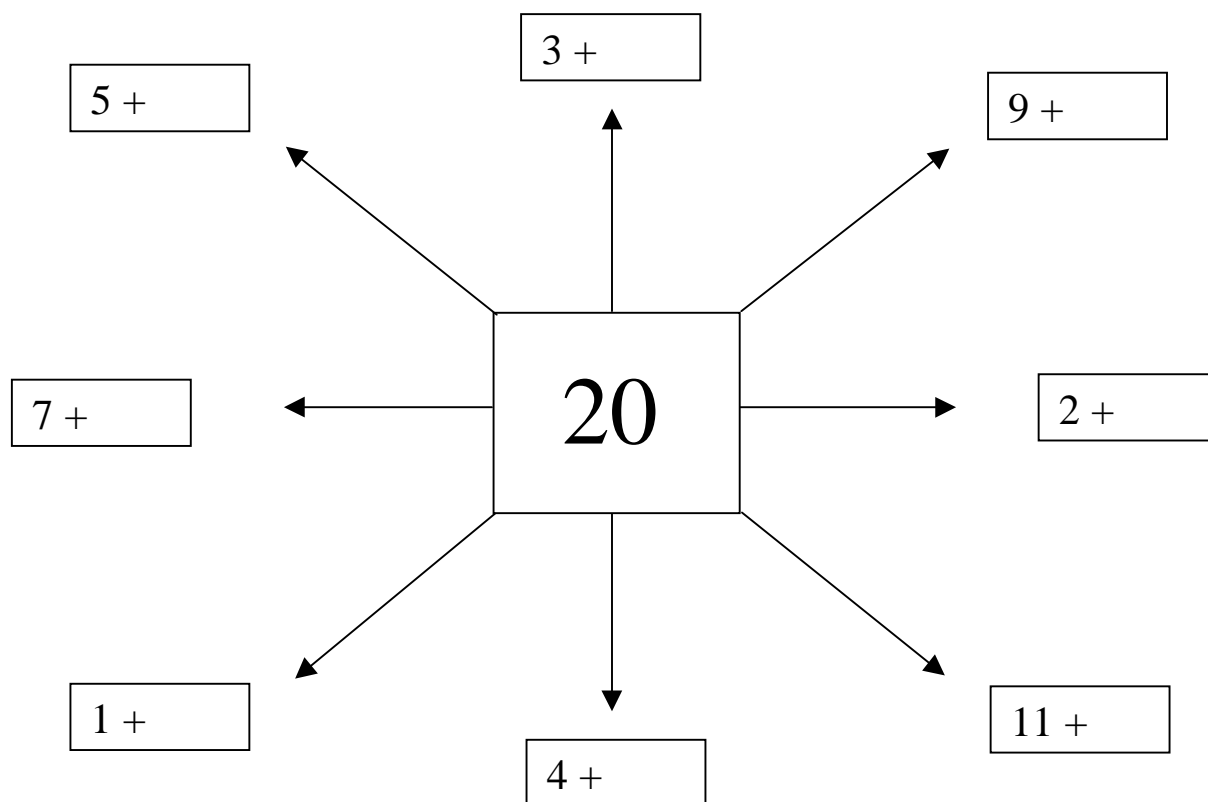
7. $19 - 4 =$

8. $19 - 9 =$

A few quick
subtractions to finish!



1. Put in the missing numbers that make each of the sums in the boxes add up to 20.



2. Write down all the pairs of numbers with a total of 20:

Eg $1 + 19$

3. How many different pairs of numbers with a total of 20 are there?

4. $20 - 4 =$

5. $20 - 9 =$

6. $20 - 3 =$

7. $20 - 12 =$

8. $20 - 14 =$

Can you check the answers by adding?



Find the difference

Find the difference between the two numbers in each pair of boxes below:

1. 17 — 5

2. 17 — 8

3. 17 — 3

4. 17 — 10

5. 17 — 6

6. 17 — 5

7. Write down all the pairs of numbers with a total of 17:

Eg $1 + 16$

8. How many different pairs of numbers with a total of 17 are there?

See how quickly you can answer these questions:

9. $14 - 8 =$

14. $17 - 8 =$

10. $13 - 7 =$

15. $12 - 9 =$

11. $18 - 4 =$

16. $15 - 5 =$

12. $15 - 7 =$

17. $19 - 2 =$

13. $11 - 8 =$

18. $16 - 8 =$

Find the difference

Find the difference between the two numbers in each pair of boxes below:

1. 14 — 5

2. 14 — 8

3. 14 — 3

4. 14 — 10

5. 14 — 6

6. 14 — 9

7. Write down all the pairs of numbers with a total of 14:

Eg $1 + 13$

8. How many different pairs of numbers with a total of 14 are there?

See how quickly you can answer these questions:

9. $15 - 9 =$

14. $16 - 7 =$

10. $14 - 8 =$

15. $11 - 2 =$

11. $19 - 5 =$

16. $14 - 6 =$

12. $13 - 8 =$

17. $18 - 3 =$

13. $12 - 9 =$

18. $15 - 8 =$

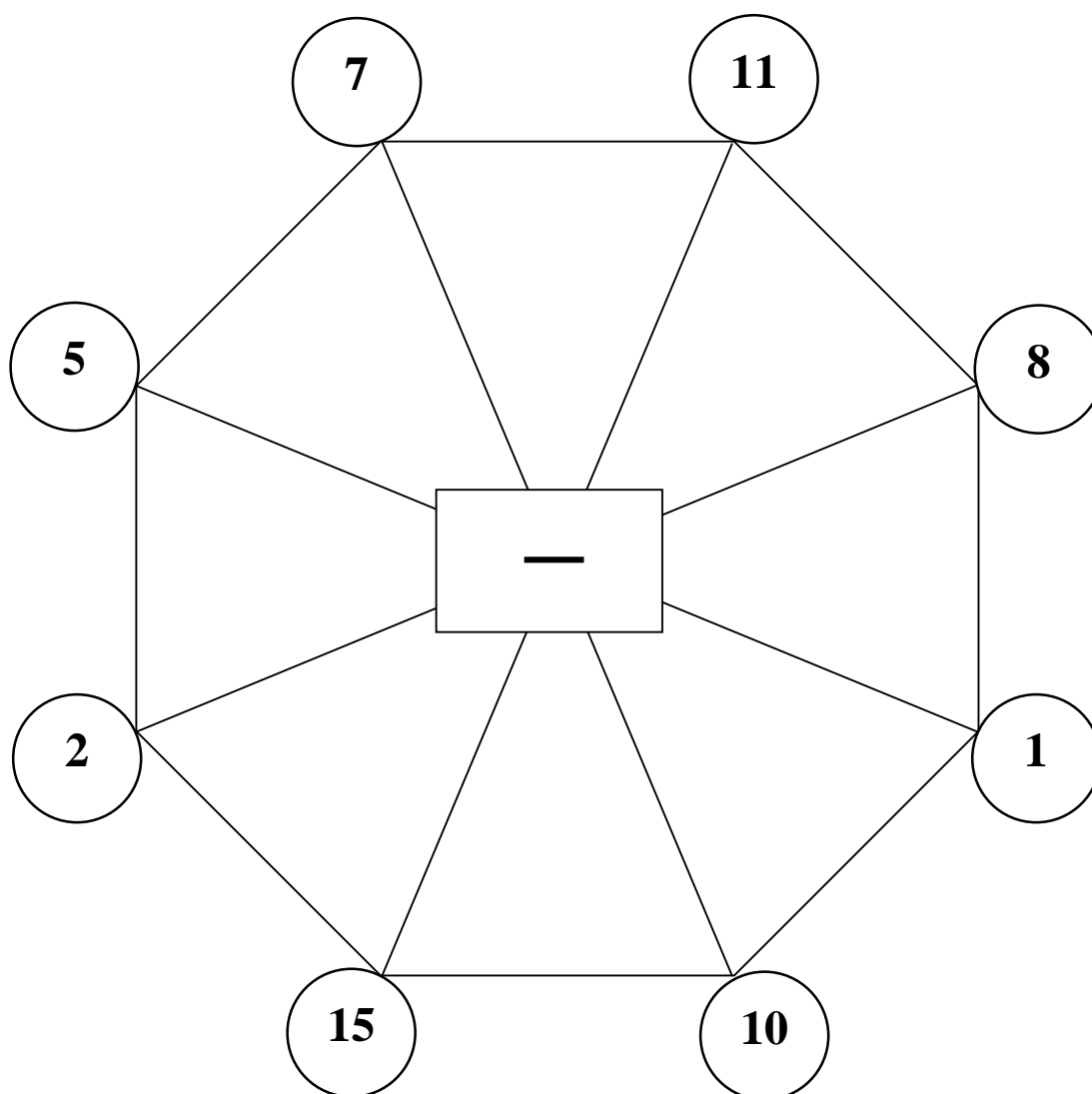
Investigate subtraction

Use the shape below to make up your own subtraction sums by linking numbers. You can go from any number to any other number, passing through the subtraction sign each time.

Eg $7 - 2 = 5$

Write the sums down and the answers without showing any working out.

If you are really feeling on good form you may like to time yourself to see how many you can do in 5 minutes.



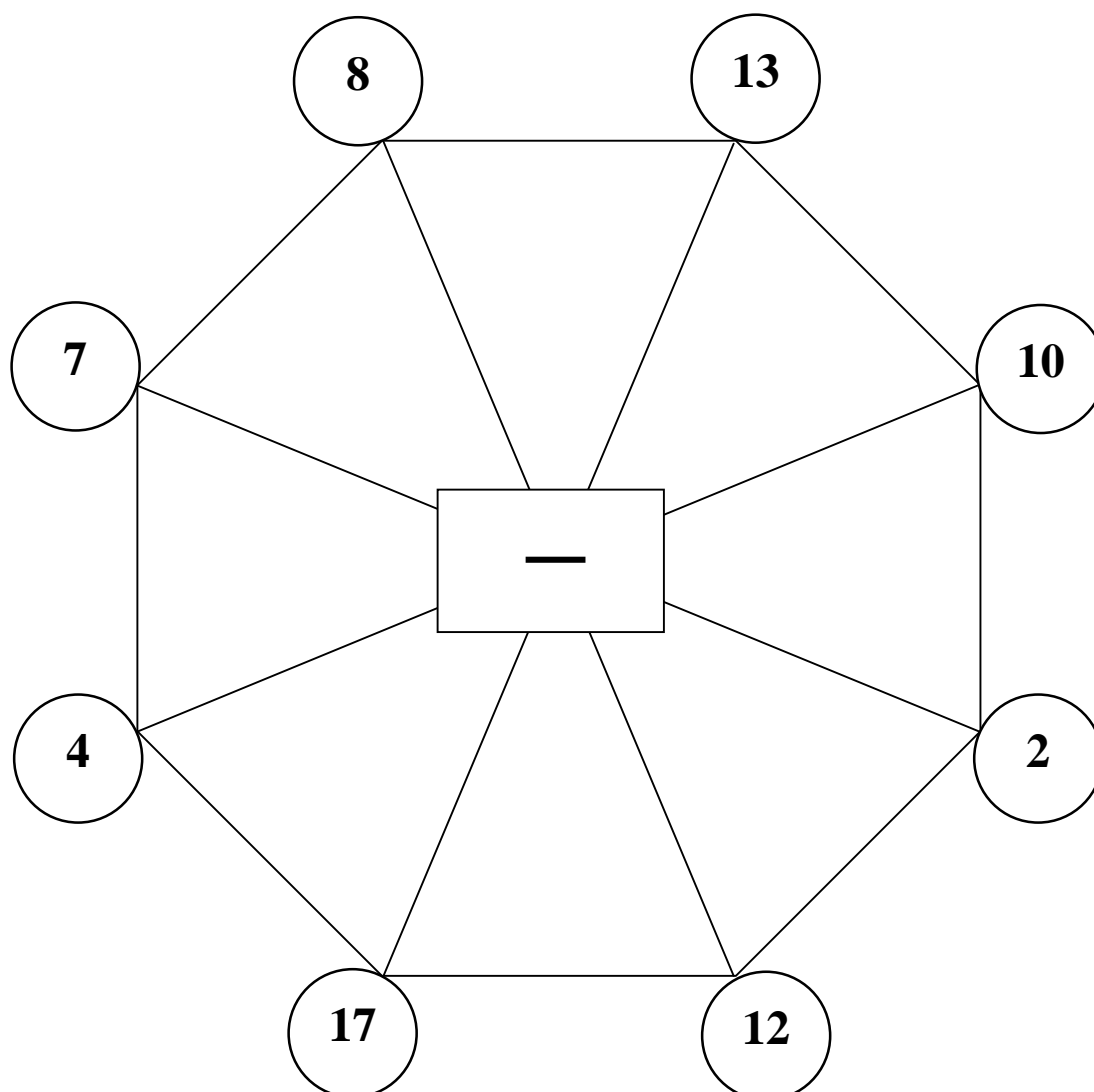
Investigate subtraction

Use the shape below to make up your own subtraction sums by linking numbers. You can go from any number to any other number, passing through the subtraction sign each time.

Eg $13 - 2 = 11$

Write the sums down and the answers without showing any working out.

Feeling in a fast mood? How many can you do in five minutes?



Adding whole tens in your head

If you know that $7 + 5 = 12$ then it is easy to work out $70 + 50$ and $700 + 500$.

$$7 + 5 = 12$$

$$70 + 50 = 120$$

$$700 + 500 = 1\ 200$$

See the pattern?

Think of $70 + 50$ as 7 tens plus 5 tens, which equals 12 tens.

Think of $700 + 500$ as 7 hundreds plus 5 hundreds, which is 12 hundreds.

Try writing the answers to the sums below without doing any working out on paper:

1. $30 + 40 =$

2. $50 + 30 =$

3. $50 + 60 =$

4. $20 + 70 =$

5. $10 + 80 =$

6. $90 + 20 =$

7. $60 + 60 =$

8. $40 + 70 =$

9. $70 + 70 =$

10. $80 + 30 =$

11. $300 + 400 =$

12. $500 + 300 =$

13. $500 + 600 =$

14. $200 + 900 =$

15. $300 + 300 =$

16. $600 + 400 =$

17. $700 + 400 =$

18. $200 + 800 =$

19. $500 + 500 =$

20. $700 + 300 =$

Fifty plus sixty is just as easy as five plus six.

No need to write the sum down eh - just the answer!



Adding whole tens in your head

If you know that $6 + 5 = 11$ then it is easy to work out $60 + 50$ and $600 + 500$.

$$6 + 5 = 11$$

$$60 + 50 = 110$$

$$600 + 500 = 1100$$

See the pattern?

Think of $60 + 50$ as 6 tens plus 5 tens, which equals 11 tens.

Think of $600 + 500$ as 6 hundreds plus 5 hundreds, which is 11 hundreds.

Try writing the answers to the sums below without doing any working out on paper:

1. $40 + 40 =$

2. $60 + 20 =$

3. $60 + 40 =$

4. $30 + 80 =$

5. $50 + 10 =$

6. $30 + 50 =$

7. $10 + 70 =$

8. $90 + 90 =$

9. $20 + 90 =$

10. $30 + 60 =$

11. $400 + 400 =$

12. $600 + 200 =$

13. $900 + 100 =$

14. $400 + 300 =$

15. $800 + 400 =$

16. $100 + 500 =$

17. $300 + 600 =$

18. $900 + 700 =$

19. $500 + 800 =$

20. $300 + 900 =$

Amazing how quickly you can do these - I bet you didn't know you were so clever!



Fill in the grid below by adding the numbers across to those going down.

Note what time you took to finish it.

Maximum time 10 minutes.

+	2	6	7	1	4	9	3	8	10	5
5										
9										
1										
3										
7										
8										
4										
2										
6										
10										
Total Score:						Time taken:				

Fill in the grid below by adding the numbers across to those going down.

Note what time you took to finish it.

Maximum time 12 minutes.

+	50	10	30	60	0	90	80	70	40	20
60										
80										
20										
30										
0										
90										
40										
10										
50										
70										
Total Score:					Time taken:					

What number do you need to add to each of these numbers to make the total 100 ?

1. 70

2. 20

3. 45

4. 29

5. 83

6. 77

7. 66

8. 91

9. 26

10. 41

What about 46?

I start with the units and add on to the next whole lot of tens

e.g. $46 + 4 = 50$

Then carry on in tens up to 100

50 to 100 is 50.

Answer: 54

How do you do these?



Double each of these numbers:

11. 24

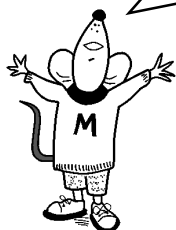
12. 45

13. 42

14. 47

15. 17

Double, double, toil
and trouble -
Shakespeare eh!
Nearly!



16. 38

17. 29

18. 35

19. 49

20. 26

What number do you need to add to each of these numbers to make the total 100 ?

1. 60

2. 30

3. 54

4. 93

5. 37

6. 55

7. 44

8. 19

9. 54

10. 21

There are several ways that you can do these in your head...

but be careful you don't add a number that will make the total 110

Eg $54 + 56 = 110$, not 100.



Double each of these numbers:

11. 35

16. 26

12. 50

17. 36

13. 43

18. 29

14. 37

19. 47

15. 16

20. 39

Doubling numbers

Double these numbers without showing any working out:

1. 230

11. 190

2. 340

12. 320

3. 420

13. 270

4. 160

14. 140

5. 260

15. 450

6. 350

16. 180

7. 470

17. 290

8. 280

18. 370

9. 390

19. 460

10. 170

20. 380

Double your money
and take it away!!
(That's an old song!)

I start with the
hundreds on these -
what do you do?



Halve these numbers without showing any working out:

21. 660

26. 460

22. 480

27. 700

23. 280

28. 340

24. 620

29. 160

25. 180

30. 520

Answers**Page 3**

A	1. 10	2. 8	3. 9	4. 10	5. 16	6. 13	7. 11	8. 13
B	1. 10	2. 8	3. 11	4. 9	5. 14	6. 15	7. 11	8. 16
C	1. 14	2. 6	3. 12	4. 10	5. 12	6. 12	7. 14	8. 17
D	1. 8	2. 10	3. 14	4. 9	5. 6	6. 16	7. 15	8. 13
E	1. 7	2. 9	3. 12	4. 14	5. 11	6. 11	7. 16	8. 15
F	1. 7	2. 7	3. 8	4. 8	5. 13	6. 12	7. 14	8. 15
G	1. 15	2. 10	3. 11	4. 18	5. 9	6. 14	7. 12	8. 17

Page 4

A	1. 10	2. 10	3. 9	4. 11	5. 15	6. 15	7. 13	8. 13
B	1. 7	2. 7	3. 12	4. 10	5. 10	6. 17	7. 16	8. 16
C	1. 10	2. 6	3. 12	4. 11	5. 12	6. 13	7. 13	8. 16
D	1. 8	2. 10	3. 14	4. 9	5. 10	6. 14	7. 15	8. 11
E	1. 5	2. 7	3. 10	4. 19	5. 11	6. 16	7. 16	8. 13
F	1. 10	2. 9	3. 10	4. 12	5. 10	6. 16	7. 18	8. 15
G	1. 10	2. 10	3. 8	4. 12	5. 11	6. 14	7. 15	8. 15

Page 5

- clockwise: 4 + 15, 8 + 11, 15 + 4, 12 + 7, 11 + 8, 9 + 10, 7 + 12, 6 + 13
- look for systematic order: 1 + 18, 2 + 17, 3 + 16, 4 + 15, 5 + 14, 6 + 13, 7 + 12, 8 + 11, 9 + 10, then it repeats in reverse.
- 9 4. 14 5. 12 6. 11 7. 15 8. 10

Page 6

- clockwise: 3 + 17, 9 + 11, 2 + 18, 11 + 9, 4 + 16, 1 + 19, 7 + 13, 5 + 15
- look for systematic order: 1 + 19, 2 + 18, 3 + 17, 4 + 16, 5 + 15, 6 + 14, 7 + 13, 8 + 12, 9 + 11, 10 + 10 then it repeats in reverse.
- 10 4. 16 5. 11 6. 17 7. 8 8. 6

Page 7

- 12 2. 9 3. 14 4. 7 5. 11 6. 12 7. look for systematic order: 1 + 16, 2 + 15, 3 + 14, 4 + 13, 5 + 12, 6 + 11, 7 + 10, 8 + 9 8. 8
9. 6 10. 6 11. 14 12. 8 13. 3 14. 9 15. 3 16. 10 17. 17 18. 8

Page 8

- 9 2. 6 3. 11 4. 4 5. 8 6. 5 7. look for systematic order: 1 + 13, 2 + 12, 3 + 11, 4 + 10, 5 + 9, 6 + 8, 7 + 7 8. 7 (not including reverse)
9. 6 10. 6 11. 14 12. 5 13. 3 14. 9 15. 9 16. 8 17. 15 18. 7

Page 9

Look for systematic list of sums e.g. all subtractions from 15 completed.
Look out for negative answers e.g. 11 - 13

Answers**Page 10**

Look for systematic list of sums e.g. all subtractions from 13 completed.

Look out for negative answers e.g. $8 - 13$.

Page 11

1. 70 2. 80 3. 110 4. 90 5. 90 6. 110 7. 120 8. 110 9. 140 10. 110
 11. 700 12. 800 13. 1 100 14. 1 100 15. 600 16. 1 000 17. 1 100
 18. 1 000 19. 1 000 20. 1 100

Page 12

1. 80 2. 80 3. 100 4. 110 5. 60 6. 80 7. 80 8. 180 9. 110 10. 90
 11. 800 12. 800 13. 1 000 14. 700 15. 1 200 16. 600 17. 900
 18. 1 600 19. 1 300 20. 1 200

Page 13

Check answers across and down - time for mark out of 100

Page 14

Check answers across and down - time for mark out of 100

Page 15

1. 30 2. 80 3. 55 4. 71 5. 17 6. 23 7. 34 8. 9 9. 74 10. 59
 11. 48 12. 90 13. 84 14. 94 15. 34 16. 76 17. 58 18. 70 19. 98 20. 52

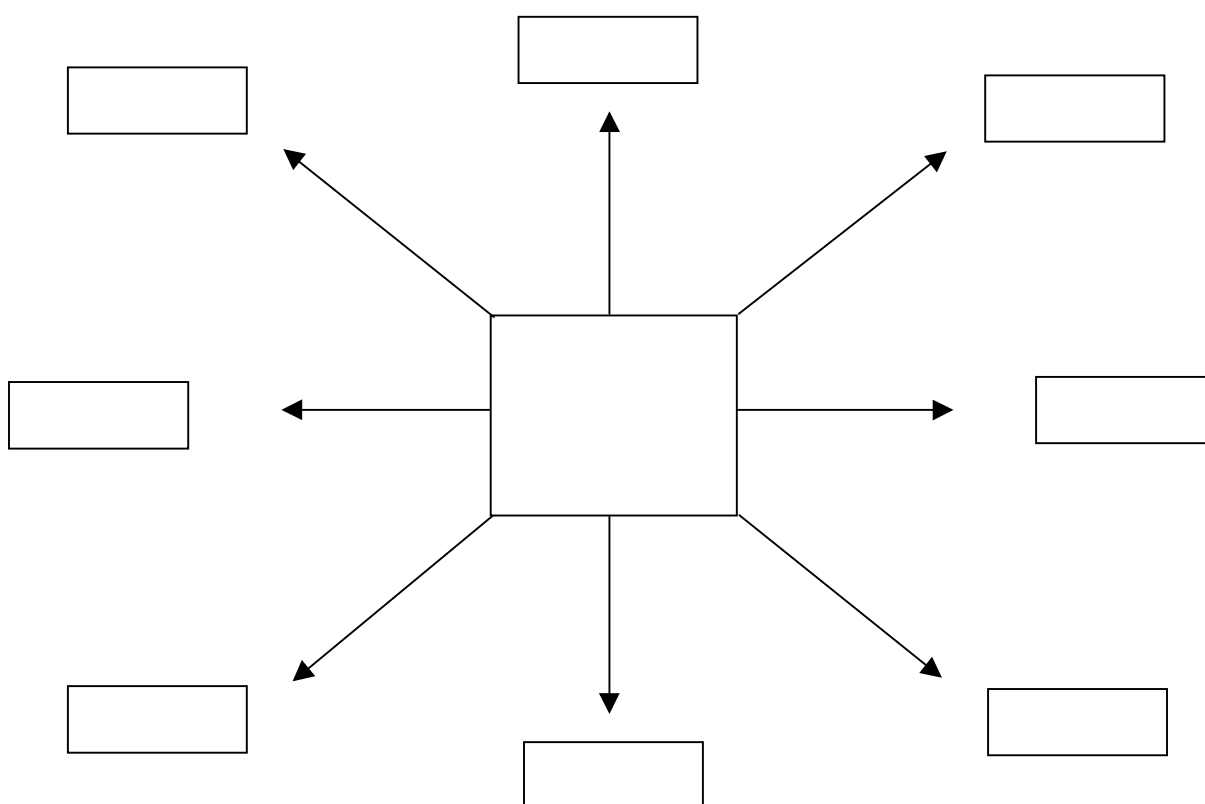
Page 16

1. 40 2. 70 3. 46 4. 7 5. 63 6. 45 7. 56 8. 81 9. 46 10. 79
 11. 70 12. 100 13. 86 14. 74 15. 32 16. 52 17. 72 18. 58 19. 94 20. 78

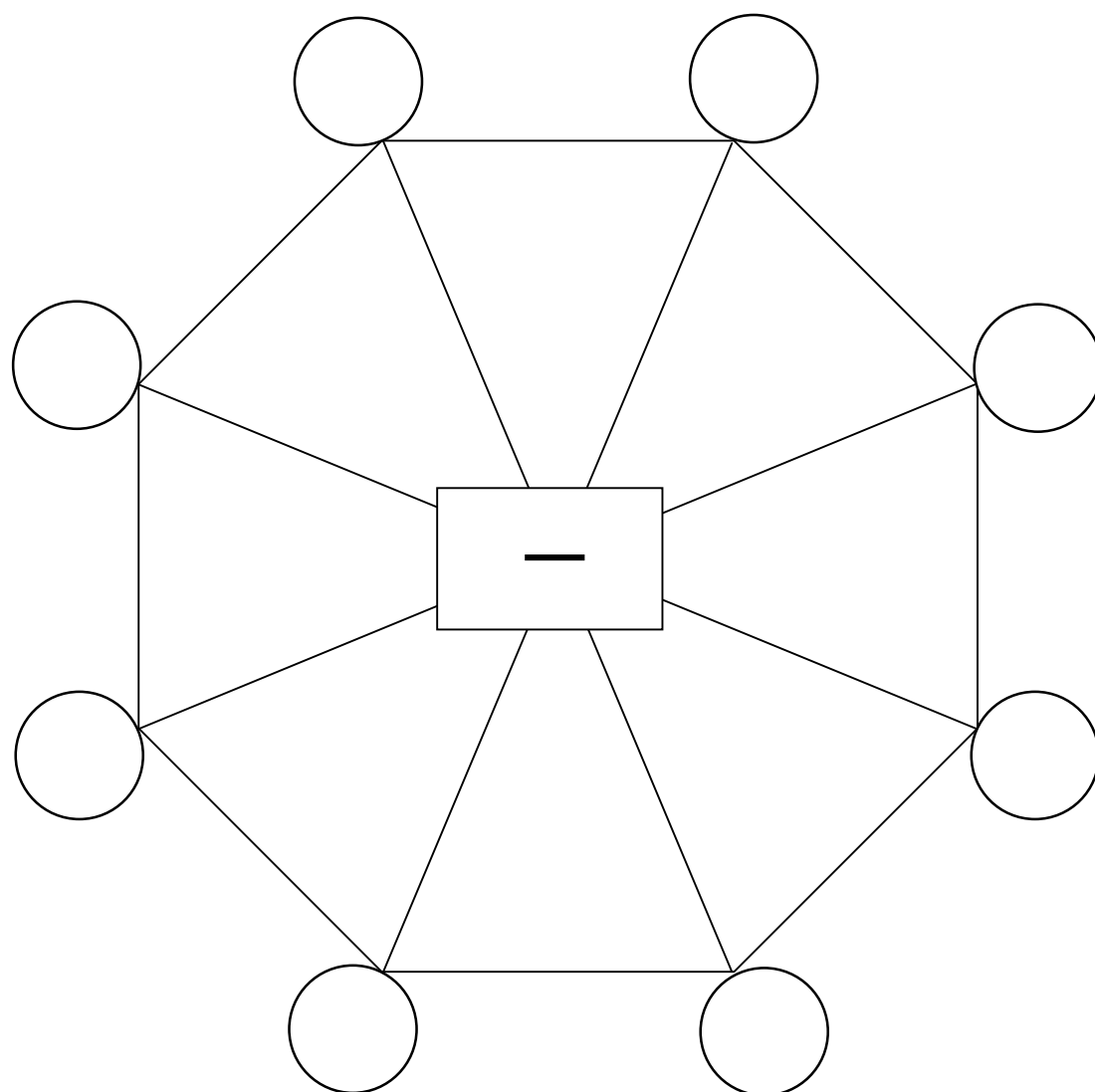
Page 17

1. 460 2. 680 3. 840 4. 320 5. 520 6. 700 7. 940 8. 560 9. 780
 10. 340 11. 380 12. 640 13. 540 14. 280 15. 900 16. 360 17. 580
 18. 740 19. 920 20. 760 21. 330 22. 240 23. 140 24. 310 25. 90
 26. 230 27. 350 28. 170 29. 80 30. 260

Fill in your own target centre number and put the first part of sums in the outside boxes as on pages 5 and 6:



Fill in your own numbers in the circles and use them for quick subtraction work, as on pages 9 and 10.



+										
Total Score:					Time taken:					

0

1

2

3

4

5

6

7

8

9

0

0