Think

MENTALS

4

Maths Strategies and Practice

1

Come with me to see how you can make maths easier. We're going to learn how to:

- **find** friendly numbers,
- **make** friendly numbers and,
- **fix** changes to numbers.

2

Friendly numbers end in **0**. They are easy to work with.

(10) is friendlier than 9

(60) is friendlier than 58

(20) is friendlier than 21

(200) is friendlier than 195

(400) is friendlier than 401

3

Let's practise **finding friendly numbers**. Tick the calculation that is easier to do in each pair, then circle the friendly numbers.

☐ 37 + 9   or   36 + (10) ✓

☐ 60 + 11   or   58 + 13 ☐

☐ 76 − 19   or   77 − 20 ☐

☐ 198 − 49   or   200 − 51 ☐

4

Sometimes you can find pairs of numbers that add up to a **friendly number**.

Find the **friendly pairs** that add up to 10 and circle them.

(7) + 9 + (3)   friendly pair

7 + 5 + 5   2 + 4 + 8

4 + 8 + 6   9 + 1 + 7

3 + 5 + 1 + 5

5

What if I can't **find** a friendly number?

53 + 56

47 + 98

?

86 − 9

Don't worry, there's not always a friendly number to find, sometimes you need to **make** a friendly number.

First you need to look for a number that can be made friendly.

6

Find the number in each addition that is easy to make friendly, then circle it.

(19) + 7

31 + 24

256 + 198

303 + 75

7

Now, **change** these numbers to **make** them friendly and show how you did it.

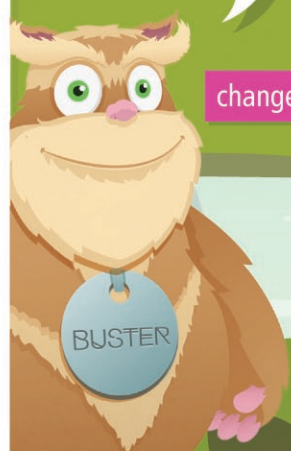|	19	31	198	303
change	+1			
friendly	20			

8

You can **fix** a change by doing the opposite of what you did to **make** a number friendly. **Fix** the change in these additions.

19 + 7

change ▶ +1   −1 ◀ fix

20 + 6

31 + 24
−1
30 +

256 + 198
+2
+ 200

303 + 75
−3
300 +

9

You can also **make** friendly numbers by breaking larger numbers into place values.

Can you **make** these numbers friendly?

173 = 100 + 70 + 3

392 =

814 =

570 =

10

How did you go? Tick the boxes below to show what you know!

- A friendly number ends in a **0**
- Friendly numbers make maths easier
- How to **find** friendly numbers
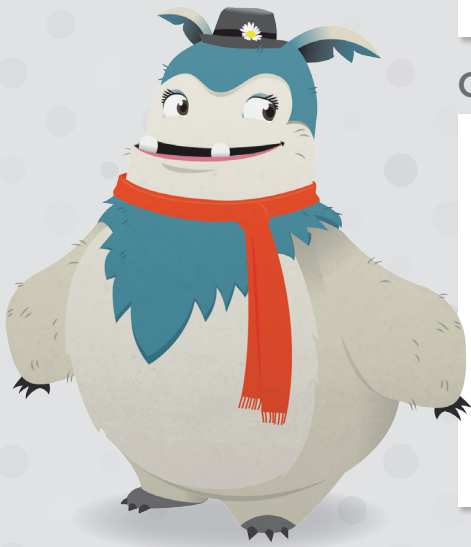- How to **make** friendly numbers
- How to **fix** my changes

Flo

11

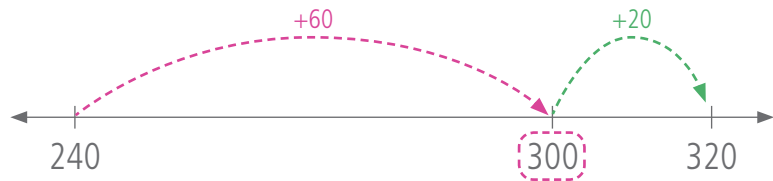Well done! Now that you know the basics, let's get started.

Addition Strategy
Friendly Jumps

Make a number line in your head to 'jump' along.

1 Jump forward to a friendly number.

$$240 + 80$$

+60   +20

240   300   320

2 Jump forward the rest.

Other Examples

$130 + $76

+$70   +$6

$130 $200 $206

794 + 67

+6   +61

794   800   861

Day 1

1	170 + 60		**11**	$540 + $63	
2	380 + 40		**12**	$860 + $44	
3	560 + 70		**13**	$320 + $86	
4	290 + 50		**14**	695 + 26	
5	830 + 90		**15**	398 + 37	
6	460 + 90		**16**	197 + 64	
7	$240 + $65		**17**	296 + 58	
8	$170 + $32		**18**	494 + 87	
9	$360 + $47		**19**	893 + 49	

10 Bree has $150 in her bank account. If she banks another $56, how much money will she have in her account?

20 On the family holiday to Sydney, Jason has travelled 798 km so far. It is another 57 km to Sydney. How far is Sydney from Jason's home?

Practice

Q1–20: /20   My time:

Day 2

Practice

1   260 + 70

2   450 + 80

3   $180 + $25

4   $290 + $16

5   294 + 28

Revision

6   3 x 2

7   12 x 2

8   33 – 6

9   82 – 3

10 Dan's family bought four 2 litre bottles of milk. How many litres is that?

11 Even numbers always end in ☐, ☐, ☐, ☐ or ☐.

12 Write one thousand, three hundred and twenty-six as a numeral. ☐

13 3 + 5 = ☐   7 + 1 = ☐   6 + 2 = ☐

14 Colour $\frac{3}{4}$ of this shape.

15 How much money is this? ☐

16 Complete this number pattern.
    62, 64, ☐, ☐, 70

17 What is the time shown on this clock? ☐ o'clock

18 1 year = ☐ months

19 Name this 3D object.

20 What are the possible outcomes when tossing a coin?

Day 3

Practice

1   840 + 90

2   290 + 60

3   $450 + $53

4   $570 + $35

5   198 + 37

Revision

6   4 x 2

7   13 x 2

8   23 – 6

9   55 – 7

10 Tahlia used 90c to buy an 80c ice-block. How much change should she get? ☐

11 Circle the even numbers in this row.
    31   32   33   34   35

12 Write 1537 in words.

13 4 + 4 = ☐   7 + 7 = ☐   8 + 8 = ☐

14 Colour $\frac{2}{3}$ of this shape.

15 How much money is this? ☐

16 Complete this number pattern.
    48, 46, ☐, ☐, 40

17 What is the time shown on this clock? ☐

18 What month is it now?

19 Name this 3D object.

20 List the possible outcomes when rolling a dice.

Day 4

1   370 + 50

2 $380 + $24

3   597 + 65

4   896 + 49

5   795 + 56

Practice

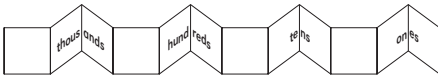**6**   6 ÷ 2

7   14 ÷ 2

8   58 − 15

9   97 − 46

10 One half of our class of 24 students walks to school. How many students is that?

Revision

11 Write all the even numbers between 10 and 20.

12 Show 1537 on this number expander.

thousands   hundreds   tens   ones

13 4 + 5 =   6 + 3 =   7 + 2 =

14 Colour $\frac{2}{5}$ of this shape.
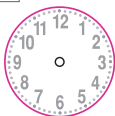
15 How much money is this?

16 Complete this number pattern.
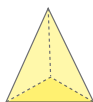
108, 110,   ,   , 116

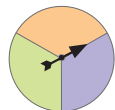**17** Draw hands on this clock to show 10 o'clock.

18 Circle the first month of the year.

January   June   July

19 Name this 3D object.

20 List the possible outcomes for this spinner.

Q1–10:   /10   11–20:   /10   My time:

Day 5

Assessment

1   340 + 80

2 $220 + $86

3   17 + 6

4   358 + 8

5   690 + 74

6   497 + 26

7   395 + 87

8   39 + 698

9   590 + 63

10 Emma's airline ticket is $170 plus $34 for travel insurance. What is the total cost?

11 Circle the even numbers in this row.

62   41   85   16   58

12 Write the numeral shown on this number expander.

4 thousands 3 hundreds 7 tens 5 ones

13 6 + 7 =   9 + 4 =   5 + 8 =

14 Colour $\frac{3}{5}$ of this shape.

15 How much money is this?

16 Complete this number pattern.

222,   ,   , 216,

17 Draw hands on this clock to show 2 o'clock.

18 Circle the last month of the year.

September   December   November

19 Which 3D object am I? I have only one surface, no straight edges and no corners.

20 List the possible outcomes.

Q1–10:   /10   11–20:   /10   My time:

Addition Strategy

Friendly Balance

Move amounts from one number to another to make easy additions.

1 **Find a number to make friendly**

2 **Make a friendly number.**
Moving part of a number keeps the addition balanced.

$\boxed{97} + 86$

move 3

3 **Calculate.**

$= \underline{100 + 83}$

$= \qquad 183$

Other Examples

$143 + \boxed{28}$

move 2

$= \underline{141 + 30}$

$= \qquad 171$

$\boxed{590} + 74$

move 10

$= \underline{600 + 64}$

$= \qquad 664$

Day 1

1	98 + 75		**11**	490 + 52	
2	95 + 67		**12**	680 + 35	
3	96 + 86		**13**	370 + 67	
4	97 + 68		**14**	890 + 43	
5	99 + 34		**15**	580 + 76	
6	98 + 43		**16**	270 + 84	
7	154 + 17		**17**	734 + 28	
8	235 + 36		**18**	314 + 57	
9	463 + 19		**19**	565 + 18	

10 97 children went to the pool on Saturday and 79 on Sunday. On the weekend, how many children went to the pool?

20 Logan's lemon cake mix weighs 470 grams and the packaging weighs 45 grams. What is the gross weight of the packet of cake mix?

Practice

Q1–20: /20

My time:

Day 2

1 98 + 33

2 99 + 87

3 144 + 17

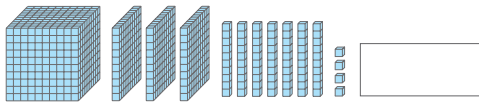**4** 414 + 28

5 480 + 34

6 3 x 3

7 6 x 3

8 45 − 10

9 299 − 10

10 Emily got $85 for her birthday. If she spends $10, how much money will she have left?

11 Write the numeral for this set of blocks.

12 4 + 5 =   6 + 3 =   2 + 7 =

13 What is the largest 4-digit number that can be made with these cards?   **4 8 1 6**

14 Where is $\frac{3}{4}$ on this number line?
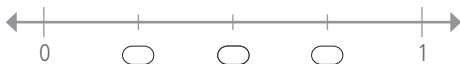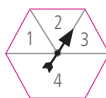

15 Show 75 cents using 3 more coins.
50c +

16 1 metre =   centimetres

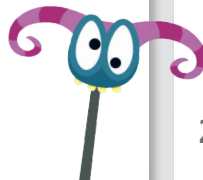**17** The time on this clock is half past   .

18 Which number has the best chance of the spinner landing on it?

19 Name this 3D object.
          prism

20 What is the fourth month of the year?

Day 3

1 97 + 46

2 95 + 28

3 233 + 39

4 250 + 68

5 $1.95 + 80c

6 4 x 3

7 9 x 3

8 84 − 8

9 $88 − $24

10 Jen bought 3 puzzle books for $5 each. How much did she spend?

11

12 Write 3 addition facts that total 10.

13 What is the smallest 4-digit number that can be made with these cards?   **4 8 1 6**

14 Where is $\frac{2}{3}$ on this number line?

15 Show 85 cents using 4 coins.

16 The height of the classroom door is closest to:
⬭ 1 metre   ⬭ 2 metres   ⬭ 4 metres
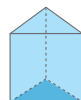
17 The time on this clock is   8.

18 Which number has the best chance of the spinner landing on it?

19 Name this 3D object.
          prism

20 How many days are there in September?

Day 4

1 35 + 96

2 355 + 28

3 670 + 56

4 $2.95 + $1.10

5 $4.95 + $1.30

6 15 ÷ 3

7 18 ÷ 3

8 858 − 10

9 439 − 10

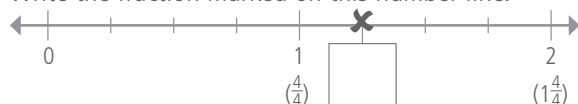**10** Three friends shared $30.00 equally. How much did each one get?

11 Draw blocks to show 1428.

12 3 + 3 = ☐   6 + 6 = ☐   9 + 9 = ☐

13 What are all the 4-digit numbers less than 2000 that can be made with these cards?

4 8 1 6

14 Write the fraction marked on this number line.

0   1   2
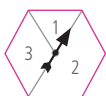($\frac{4}{4}$)   ($1\frac{4}{4}$)

15 Show 95 cents using 4 coins.

16 The distance from a child's shoulder to their feet is closest to:
◯ 1 metre   ◯ 2 metres   ◯ 4 metres

17 Draw hands on this clock to show half past 11.

18 Which number has the best chance of the spinner landing on it? ☐

19 Name this 3D object.

20 November is the ☐ th month of the year.

Q1–10:   /10   11–20:   /10   My time:

Day 5

1 98 + 87

2 95 + 67

3 79 + 17

4 228 + 23

5 $5.95 + $1.60

6 196 + 58

7 $397 + $36

8 696 kg + 28 kg

9 243 + 18

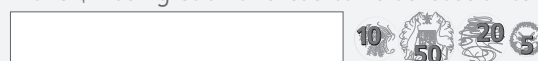**10** Shae bought a roll for $2.95 and a drink for $1.50. How much did she spend?

**11**
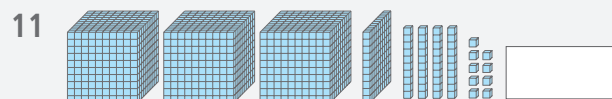
12 Write three addition facts that each total 12.

13 What is an odd number greater than 8000 that can be made with these cards?

4 8 1 6

14 Where is $\frac{3}{5}$ on this number line?

0   ◯   ◯   ◯   ◯   1

15 Make $1 using each of these coins at least once.

10 50 20 5

16 The length of a car is closest to:
◯ 1 metre   ◯ 2 metres   ◯ 4 metres

17 The time on this clock is ☐ past ☐ .

18 Which number has the best chance of the spinner landing on it? ☐
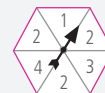
19 Which 3D object am I? I have 5 faces, 9 edges and 6 corners.

20 How many days are in a non-leap year?

Q1–10:   /10   11–20:   /10   My time:

Day 1

1   230 + 70

2   450 + 80

3   620 + 90

4   380 + 80

5   $870 + $39

6   $260 + $45

7   $580 + $22

8   195 + 47

9   798 + 65

10 What is the total cost to fly to New Zealand for $290 and return for $470?

Revision

11 Write the next five even numbers after 70.

12 3000 + 100 + 60 + 9 =

13 2 x 7 =   4 x 2 =   2 x 9 =

14 Find friendly pairs to calculate the answer.

    1 + 6 + 9 + 4 + 1 =

15 How much money is this?

16 Complete this number pattern and the rule.
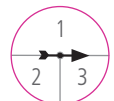
    5, 8, 7, 10, 9,   ,   (+   , –   )

17 Which is closest to the height of an adult emu?
    ◯ 2 cm   ◯ 20 cm   ◯ 2 m

18 In 10 minutes the time will be
                                                .

19 Order from shortest to longest.

    [ ] 2 weeks   [ ] 1 year   [ ] 6 months

20 Which number has the best chance of the arrow landing on it? [ ]

Day 2

1   100 – 36

2   150 – 75

3   850 – 75

4   480 – 42

5   960 – 34

6   100 – 49

7   650 – 95

8   760 – 85

9   600 – 180

10 How much should I cut off a 900 mm piece of timber to make it 787 mm?

Revision

11 Write the next five odd numbers after 35.

12 7000 + 800 + 10 =

13 8 x 2 =   2 x 3 =   5 x 2 =

14 Find friendly pairs to calculate the answer.

    7 + 5 + 3 + 8 + 2 =

15 How much money is this?

16 Complete this number pattern and write the rule.
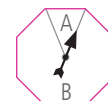
    1, 2, 4, 8, 16,   ,   (   )

17 Which is closest to a crocodile's length?
    ◯ 3 m   ◯ 30 cm   ◯ 30 m

18 In 10 minutes the time will be
                                                .

19 Order from shortest to longest.

    [ ] 30 days   [ ] 2 months   [ ] 4 weeks

20 Which letter has the best chance of the arrow landing on it? [ ]

Q1–10:   /10   11–20:   /10   My time:

Q1–10:   /10   11–20:   /10   My time:

Day 3

1 22 x 2

2 54 x 2

3 23 x 2

4 72 x 2

5 63 x 2

6 82 x 2

7 55 x 2

8 48 x 2

9 87 x 2

10 What is the cost of 2 family passes to the museum at $38 each?
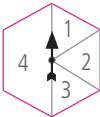
11 Write the next five even numbers after 95.

12 5000 + 20 + 6 =

13 2 x 10 =   2 x 2 =   6 x 2 =

14 9 + 2 + 6 + 8 + 1 + 4 =

15 How much money is this?   5 5 10 10

16 Complete this number pattern and the rule.

3, 13, 12, 22, 21, ___, ___   (+___, –___)

17 Which is closest to the width of the classroom door?
◯ 1 m   ◯ 10 cm   ◯ 100 m

18 In 10 minutes the time will be _____.

19 Order from shortest to longest.

___ 1 month   ___ 1 fortnight   ___ 3 weeks

20 Which number has the best chance of the arrow landing on it?

Revision

Day 4

1 16 ÷ 2

2 $20 ÷ 2

3 42 ÷ 2

4 84 ÷ 2

5 400 ÷ 2

6 1000 m ÷ 2

7 220 ÷ 2

8 640 ÷ 2

9 310 ÷ 2

10 One lap of the course is 900 metres. How far is half a lap?
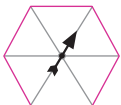
11 Write the next five odd numbers after 1395.

12 10 000 + 8000 + 2 =

13 2 x 50 =   2 x 80 =   2 x 90 =

14 18 + 4 + 13 + 6 + 7 =

15 How much money does Alana have if she has 2 of each Australian coin?

16 Complete this number pattern and write the rule.

240, 120, 116, 58, 54, ___, ___   (___, ___)

17 Which is closest to the height of an Airbus A380 plane?
◯ 2.4 m   ◯ 24 m   ◯ 240 m

18 In 10 minutes the time will be _____.

19 Order from shortest to longest.

___ 51 weeks   ___ 6 months   ___ 365 days

20 Number this spinner so that the arrow is most likely to land on number 3.

Revision

Day 5

1 570 + 60 [ ]

2 397 + 84 [ ]

3 $100 − $27 [ ]

4 790 − 54 [ ]

5 32 x 2 [ ]

6 81 x 2 [ ]

7 28 ÷ 2 [ ]

8 300 mL ÷ 2 [ ]

9 860 ÷ 2 [ ]

10 How much is saved by paying $290 for a flight instead of $470? [ ]

11 Write the next five even numbers after 590.

[ ]

12 10 000 + 700 + 60 + 5 = [ ]

13 70 x 2 = [ ]   40 x 2 = [ ]

60 x 2 = [ ]

14 15 + 2 + 5 + 9 + 18 = [ ]

15 How much money is this? [ ]

16 Complete this number pattern and the rule.

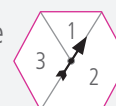44, 22, 20, 10, 8, [ ], [ ]   ([ ], [ ])

17 Which is closest to the wingspan of an Airbus A380 plane?
◯ 80 cm   ◯ 8 m   ◯ 80 m

18 In 10 minutes the time will be

[ ] .

19 Order from shortest to longest.

[ ] 90 days   [ ] 9 months   [ ] $\frac{1}{2}$ year

20 Which number has the best chance of the arrow landing on it? [ ]

Assessment

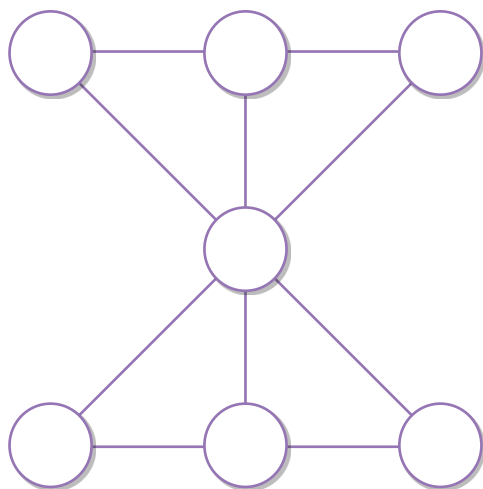| Q1–10:	/10	Q11–20:	/10	My time:

Think Box

Number Up

Copy the digits from the blue boxes into the circles. The total of each line of three needs to add to 12 or 18. Use each number once.

Each line must total 12

1 2 3 4 5 6 7

Each line must total 18

3 4 5 6 7 8 9