Think MENTALS 5

Maths Strategies and Practice

Making Maths Friendly
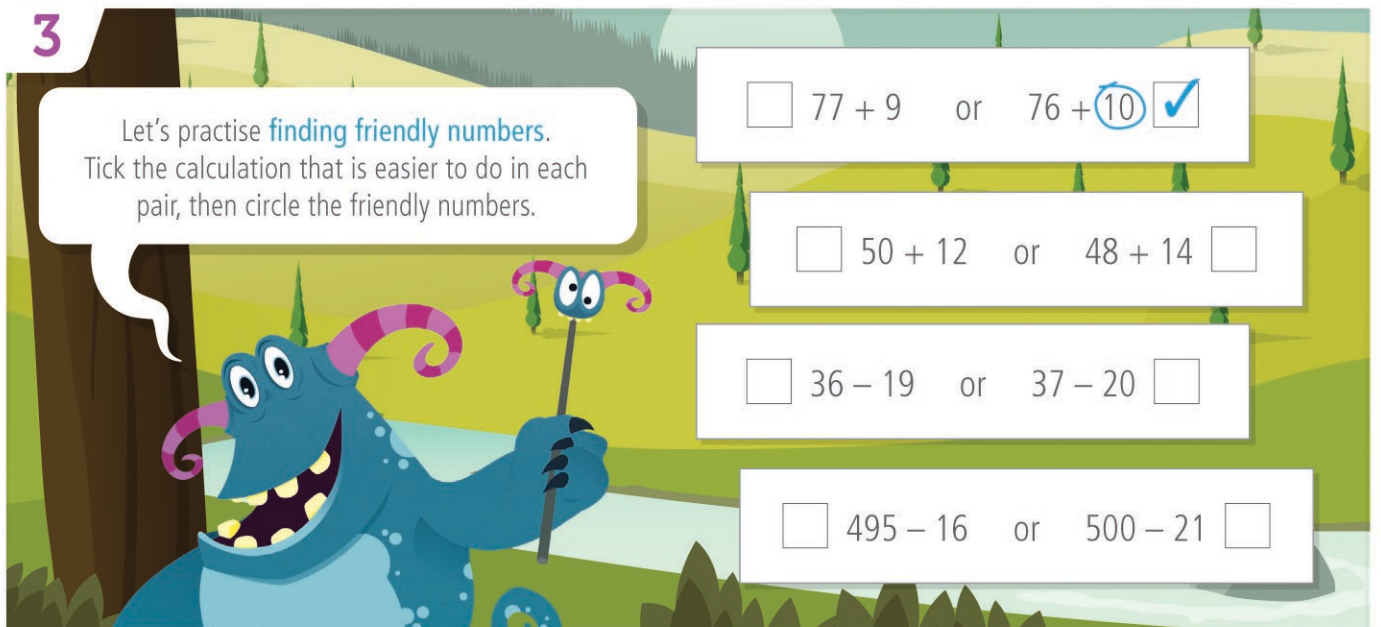
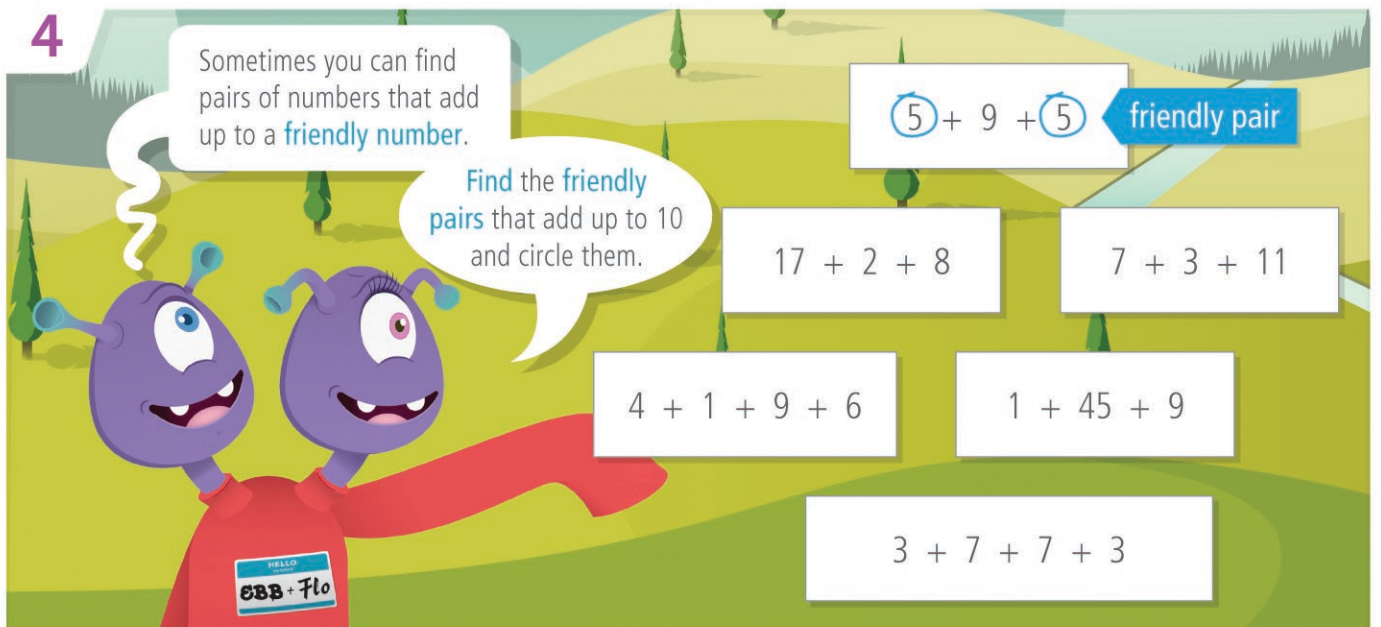BUSTER

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firefly education

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,
- **fix** changes to numbers.

2

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

10 is friendlier than 9

70 is friendlier than 68

30 is friendlier than 31

500 is friendlier than 495

200 is friendlier than 202

BUS

3

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

☐ 77 + 9 or 76 + ⑩ ✔

☐ 50 + 12 or 48 + 14 ☐

☐ 36 − 19 or 37 − 20 ☐

☐ 495 − 16 or 500 − 21 ☐

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.

⑤ + 9 + ⑤ **friendly pair**

17 + 2 + 8   7 + 3 + 11

4 + 1 + 9 + 6   1 + 45 + 9

3 + 7 + 7 + 3

EBB + Flo

5

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

98 + 17

149 + 26

?

73 − 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.

(29) + 46

51 + 26

155 + 102

497 + 125

7

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

change

friendly

29	51	102	497
+1			
30			

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.

29 + 46

change → +1   −1 ← fix

30 + 45

51 + 26

−1

50 +

155 + 102

−2

+ 100

497 + 125

+3

500 +

BUSTER

9

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

Can you **make** these numbers friendly?
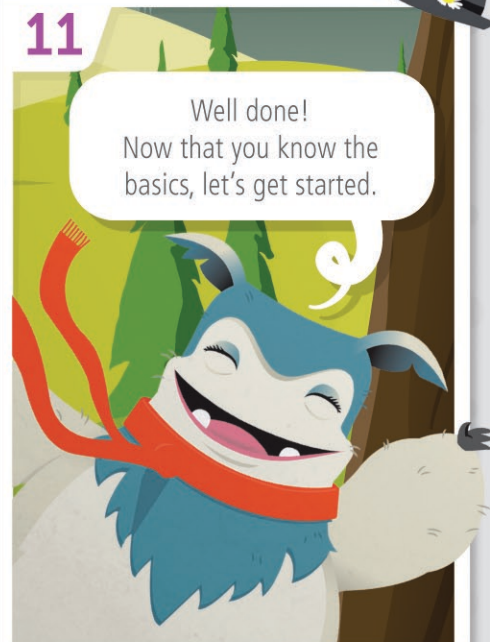
853 = 800 + 50 + 3

419 =

272 =

690 =

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

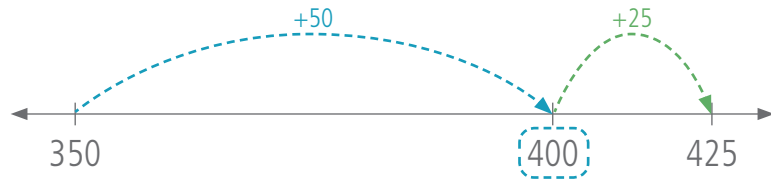Well done! Now that you know the basics, let's get started.

Addition Strategy

Friendly Jumps

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

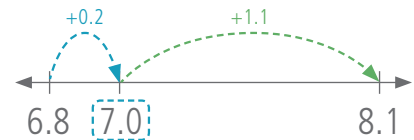**1** **Jump forward to a friendly number.**

$$350 + 75$$

+50   +25

350   400   425

2 **Jump forward the rest.**

Other Examples

$695 + $60

+$5   +$55

$695 $700 $755

6.8 + 1.3

+0.2   +1.1

6.8   7.0   8.1

Day 1

#			#		
1	250 + 75		11	15.8 + 0.4	
2	180 + 60		12	3.5 + 0.8	
3	670 + 38		13	7.7 + 0.6	
4	498 + 22		14	22.6 + 0.5	
5	950 + 55		15	9.4 + 0.8	
6	$795 + $40		16	197 + 24	
7	$130 + $85		17	496 + 18	
8	$4.90 + 45c		18	395 + 66	
9	$5.50 + 80c		19	890 + 59	

10 How much for a milkshake and a cupcake?

$2.95

50c

20 A 1140 mL jug of lemonade was mixed with 85 mL of fruit cordial. How much drink was made?

Practice

Q1–10:   /20   My time:

Day 2

1   380 + 45

2   $550 + $75

3   $1.90 + 50c

4   $3.50 + 85c

5   690 + 84

6   44 x 2

7   52 x 2

8   900 – 50

9   400 – 20

10 18 ÷ 2

11 Complete this expanded notation.

   ☐ = 9000 + 100 + 40 + 6

12 Write 6275 using expanded notation.

13 Which number has the greater value, 4.14 or 4.4?

14 Write these numbers from least to greatest.

   7.77   7.07   0.77   ☐ , ☐ , ☐

15 How much orange juice is in this jug?

   1 L
   500 mL

16 How much more orange juice is needed to fill the jug to the 1 L mark?

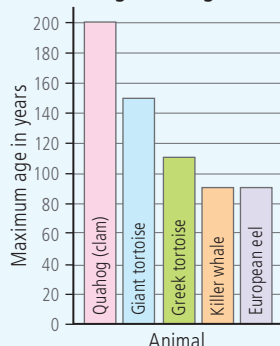17 What is the next number in this pattern?

   1.5   2.0   2.5   3.0   ☐

18 What is the repeated gap in the pattern?

   ◯ +5   ◯ +0.5   ◯ +1.5

19 What is the maximum age of the Quahog (clam)?

20 Which animal has a maximum age of 150 years?

The Five Longest-living Animals

Q1–10:   /10   Q11–20:   /10   My time:

Day 3

1   880 kg + 55 kg

2   160 m + 80 m

3   7.5 + 0.8

4   5.6 s + 0.6 s

5   9.3 km + 0.8 km

6   $45 x 2

7   24 hours x 2

8   100 mL – 55 mL

9   200 – 75

10 $80 ÷ 2

11 What is the mass shown on the scales?

   2 kg
   1500 g   500 g
   1 kg
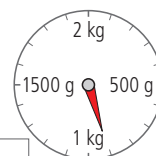
12 What mass needs to be added for the scales to reach 1.5 kg?

13 What is the next number in this pattern?

   6.6   6.4   6.2   6.0   ☐

14 What is the repeated gap in the pattern?

   ◯ –2   ◯ –0.2   ◯ –2.2

15 Which number has the greater value, 1.99 or 1.19?

16 Write these numbers from least to greatest.

   5.2   2.05   5.02   ☐ , ☐ , ☐

17 Complete this expanded notation.

   ☐ = 3000 + 300 + 80 + 5

18 Write 1221 using expanded notation.

19 Which two animals have the closest lifespan?

20 Which animal has a maximum age of 110 years?

Q1–10:   /10   Q11–20:   /10   My time:

Day 4

1 1170 + 75 ☐

2 2080 km + 88 km ☐

3 14.3 s + 0.8 s ☐

4 22.5 + 0.7 ☐

5 395 L + 67 L ☐

6 73 x 2 ☐

7 2 x 84 ☐

8 600 − 35 ☐

9 1000 mL − 555 mL ☐

10 240 ÷ 2 ☐

11 Which number has the greater value, 33.22 or 33.3? ☐

12 Write these numbers from least to greatest.

1.1 0.11 1.01 ☐ , ☐ , ☐

13 Complete this expanded notation.

☐ = 4000 + 20 + 8

14 Write 7077 using expanded notation.

☐

15 What temperature is shown by this thermometer? ☐

16 What will the temperature be if it increases 4 °C, then drops 10 °C? ☐

17 What is the next number in this pattern?

9.1 10.2 11.3 12.4 ☐

18 What is the repeated gap in the pattern? ☐
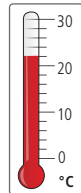
19 Which mammal is 20 km/h slower than a pronghorn antelope?

○ hare 72 km/h ○ greyhound 68 km/h
○ horse 69 km/h ○ springbok 80 km/h

20 Which mammal is capable of exceeding a 100 km/h speed limit?

☐

| Q1–10: | /10 | Q11–20: | /10 | My time: |

Day 5

1 450 + 80 ☐

2 170 + 65 ☐

3 580 + 35 ☐

4 $6.60 + 45c ☐

5 $8.50 + 85c ☐

6 5.7 + 0.7 ☐

7 50.6 + 0.5 ☐

8 9.4 + 0.8 ☐

9 197 + 28 ☐

10 498 + 50 ☐

11 Complete this expanded notation.

☐ = 8000 + 900 + 10 + 4

12 Write 1915 using expanded notation.

☐

13 What is the next number in this pattern?

5.4 5.1 4.8 4.5 4.2 ☐

14 What is the repeated gap in the pattern? ☐

15 Which number has the greater value, 7.61 or 7.16? ☐

16 Write these numbers from least to greatest.

4.2 2.04 2.24 ☐ , ☐ , ☐

17 How much water is in this jug? ☐

2 L
1500 mL
1 L
500 mL

18 How much more water is needed to fill the jug to the 2 L mark? ☐
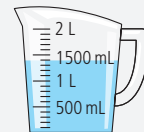
19 Which two mammals have a maximum recorded speed of 80 km/h?

☐

20 Which mammal can outrun a springbok by 25 km/h?

☐

World's Five Fastest Mammals	
Mammal	Maximum recorded speed (km/h)
Cheetah	105
Pronghorn antelope	89
Mongolian gazelle	80
Springbok	80
Grant's gazelle	76

| Q1–10: | /10 | Q11–20: | /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.

$$\boxed{499} + 51$$
move 1

3 **Calculate.**

$$= 500 + 50$$

$$= \quad 550$$

Other Examples

$$\$42 + \boxed{\$38}$$
move 2

$$= \$40 + \$40$$
$$= \quad \$80$$

$$\boxed{7.9} + 2.3$$
move 0.1

$$= 8.0 + 2.2$$
$$= \quad 10.2$$

Day 1

1	0.9 + 0.6	**11**	599 + 61
2	1.9 + 0.8	**12**	199 + 71
3	9.9 + 0.4	**13**	797 + 43
4	4.2 + 0.9	**14**	290 + 510
5	7.7 + 1.8	**15**	$294 + $106
6	59 + 61	**16**	$9.80 + $5.20
7	52 + 98	**17**	$1.95 + $1.05
8	71 + 49	**18**	$595 + $55
9	88 + 92	**19**	$280 + $820

10 Jojo's car had 28 L of fuel in the tank. She pumped 32 L more to fill it. How much fuel does the tank hold?

20 Jojo drove her car 195 km before lunch. It is another 55 km to her destination. What will Jojo's total driving distance be?

Practice

Q1–10: /20

My time:

Day 2

1	9.9 + 0.6	
2	2.7 + 3.3	
3	38 + 42	
4	505 + 195	
5	99c + 88c	

Practice

6	16 x 5	
7	22 x 5	
8	40 − 19	
9	80 − 29	
10	93 ÷ 3	

Revision

11 Circle multiples of 3.

4   9   21   23   30

12 Write the next three multiples of 5 after 40.

☐ , ☐ , ☐

13 2 x 6 = ☐   3 x 7 = ☐   5 x 5 = ☐

14 Complete this multiplication grid.

x	2	3	5	10
2				
4				

15 Measure this line to the nearest millimetre. ☐

16 In centimetres, the measurement is equal to:

◯ 2.1 cm   ◯ 2.5 cm   ◯ 2.9 cm

17 Double 5, add 7, then subtract 2. ☐

18 Multiply 4 by 3, add 8, then halve. ☐

19 In which year did Sydney host the Summer Olympic Games? ☐

20 Which city hosts the Summer Olympic Games in 2020?

☐

Day 3

1	7.8 m + 2.2 m	
2	91 L + 89 L	
3	395 + 205	
4	$4.90 + $5.10	
5	895 km + 55 km	

Practice

6	18 x 5	
7	$66 x 5	
8	100 − 59	
9	70 kg − 39 kg	
10	848 ÷ 4	

Revision

11 2 x 8 = ☐   3 x 8 = ☐   5 x 7 = ☐

12 Complete this multiplication web.
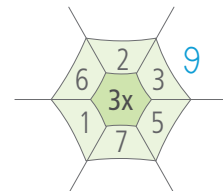
13 Measure the height of this frog to the nearest millimetre. ☐

14 Write the measurement in centimetres. ☐

15 Circle multiples of 2.

5   7   8   18   41   42

16 Write the next three multiples of 4 after 16.

☐ , ☐ , ☐

17 Add 6 to 94, double, then subtract 50. ☐

18 Multiply 7 by 3, subtract 1, then divide by 5. ☐

19 Athens hosted the first Olympic Games of the modern era in 1896. When was Athens host city again? ☐

**20** Are Summer Olympic Games years also leap years? ☐

Summer Olympic Games	
Host City	**Year**
Sydney	2000
Athens	2004
Beijing	2008
London	2012
Rio de Janeiro	2016
Tokyo	2020

Q1–10: /10   Q11–20: /10   My time:

Q1–10: /10   Q11–20: /10   My time:

Day 4

1   66.9 + 3.1

2   7.1 + 0.9 + 8.4

3   99 + 51 + 30

4   1094 + 106

5   5005 + 4995

Revision

6   64 x 5

7   120 x 5

8   300 − 149

9   1100 − 99

10 609 ÷ 3

11 Measure the length of this grasshopper's body to the nearest millimetre.
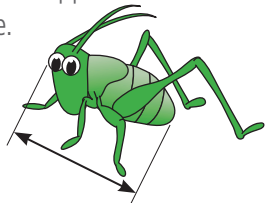
12 Write the measurement in centimetres.

13 5 x 3 =   2 x 7 =   8 x 10 =

14 2 x 8 =   3 x 6 =   9 x 10 =

15 Halve 16, add 1, then multiply by 3.

16 Subtract 2 from 37, divide by 5, then add a dozen.

17 Are the following numbers mostly multiples of 2, 3 or 5?

    4   8   12   14   16

18 Are the following numbers mostly multiples of 4, 5 or 6?

    10   15   30   45   50

19 How often is the football World Cup held?

20 Which country hosted the football World Cup eight years after Germany?

World Cup Football	
Host Country	Year
Germany	2006
South Africa	2010
Brazil	2014
Russia	2018
Qatar	2022

Day 5

Assessment

1   5.8 + 2.2

2   1.9 + 0.6

3   3.7 + 4.3

4   29 + 31

5   62 + 58

6   99c + 26c

7   105 + 195

8   495 + 55

9   $10.10 + $4.90

10 380 + 220

11 Add 3 to 17, double, then subtract 2.

12 Multiply 5 by 5, subtract 4, then double.

13 8 x 30 =   5 x 800 =

    17 x 10 =

14 Complete this multiplication grid.

x	9	7	4	2
5				
3				

15 Circle multiples of 5.

    8   10   25   28   35

16 Write the next three multiples of 6 after 12.

    __ , __ , __

17 Measure the length of the pencil to this nearest millimetre.

18 Write the measurement in centimetres.

19 Which country hosts the World Cup in 2022?

20 In which year is the World Cup held after Qatar is the host country?

Day 1

1	440 + 80	
2	170 + 55	
3	560 + 45	
4	$9.60 + 45c	
5	$5.50 + 85c	
6	2.7 + 0.7	
7	30.6 + 0.5	
8	5.4 + 0.8	
9	197 + 38	
10	298 + 50	

Revision

11 How much orange juice is in this jug?

12 How much more orange juice is needed to fill the jug to the 1 L mark?

13 $\frac{1}{2}$ hour = ___ minutes

14 2 weeks = ___ days

15 37 x 100 = ___

16 8100 ÷ 10 = ___

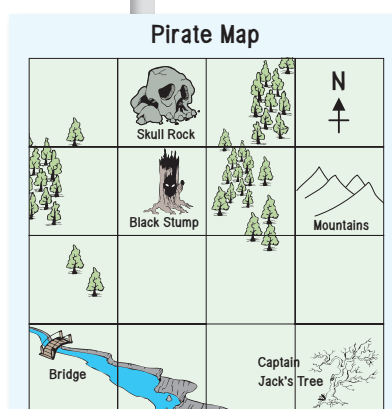**17** Write forty thousand as a numeral. ___

18 Which digit is in the thousands place in 23 100? ___

19 Which map feature is located north of Captain Jack's Tree?
○ Mountains ○ Waterfall ○ Bridge

20 The direction from the Mountains to the Black Stump is:
○ north ○ south ○ east ○ west

Q1–10: /10   Q11–20: /10   My time:

Day 2

1	710 – 60	
2	540 – 50	
3	8.6 – 0.7	
4	3.2 – 0.4	
5	900 – 51	
6	200 – 22	
7	100 – 55	
8	$5.50 – 80c	
9	$9.20 – 50c	
10	$18.20 – 40c	

Revision

11 How much liquid is in this container?

12 How much more liquid is needed to make 80 mL?
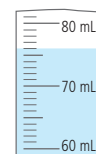
13 $\frac{1}{4}$ hour = ___ minutes

14 3 weeks = ___ days

15 45 x 100 = ___

16 1600 ÷ 10 = ___

17 Write thirty-three thousand as a numeral. ___

18 Which digit is in the hundreds place in 87 200? ___

Pirate Map

Skull Rock
Black Stump
Mountains
Bridge
Captain Jack's Tree
N

19 Which location is north of the Black Stump?
___

20 The direction from the Mountains to Captain Jack's Tree is ___.
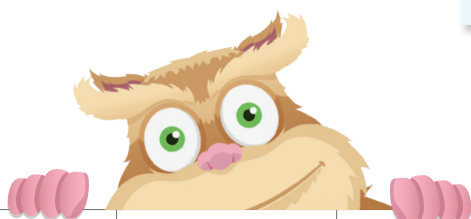
Q1–10: /10   Q11–20: /10   My time:

Day 3

1 8 x 15

2 18 x 5

3 16 x 3

4 16 x 15

5 6 x 15

6 45 x 8

7 35 x 6

8 35 x 4

9 15 x 18

10 35 x 12

Revision

11 Which digit is in the ten thousands place in 20 710?

12 Which of these numbers has the greater value, 50 550 or 55 500?

13 How much liquid is in this cup of medicine?

200 mL

100 mL

14 How much is half the amount shown?

15 Which one is equal to 5000?
   ⬭ 50 x 10   ⬭ 50 x 100   ⬭ 50 x 1000

16 Which one is equal to 99?
   ⬭ 9900 ÷ 10   ⬭ 9900 ÷ 100   ⬭ 9900 ÷ 1000

17 How many minutes in $\frac{3}{4}$ of an hour?

18 48 hours = ☐ days

19 Which pirate ship is north of the island?

20 Which pirate ship is south of Tempest?

Q1–10: /10   Q11–20: /10   My time:
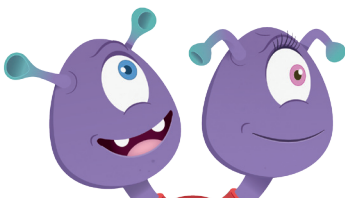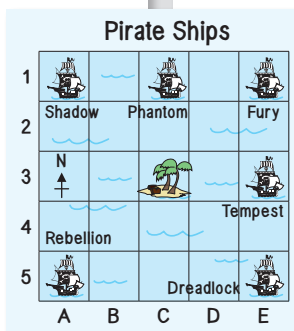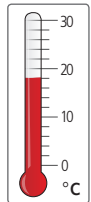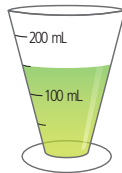
Day 4

1 $\frac{1}{3}$ of 18

2 $\frac{1}{7}$ of 49

3 $\frac{1}{2}$ of 48

4 $\frac{1}{5}$ of 30

5 $\frac{1}{4}$ of 28

6 $\frac{1}{9}$ of 81

7 $\frac{1}{6}$ of 36

8 $\frac{1}{2}$ of 82

9 $\frac{1}{7}$ of 35

10 $\frac{1}{8}$ of 64

Revision

11 220 x 100 =

12 8000 ÷ 100 =

13 A movie screened for $1\frac{3}{4}$ hours. How many minutes did it last?

14 36 hours = ☐ days

15 What temperature is shown by this thermometer?

30
20
10
0
°C

16 The temperature increased a further 2 °C that day before dropping 12 °C to its minimum. What was the minimum temperature?

17 Write eighty-eight thousand as a numeral.

18 Which of these numbers has the greater value, 12 110 or 12 102?

19 How many pirate ships are east of map reference B1?

20 Which pirate ship would sail east then north to the island?

Pirate Ships

1 Shadow   Phantom   Fury
2
3 N↑
4 Rebellion
5 Dreadlock   Tempest
   A B C D E

Q1–10: /10   Q11–20: /10   My time:

Day 5

1   840 + 80   ☐

2   270 + 65   ☐

3   2.2 − 0.8   ☐

4   3.5 − 0.6   ☐

5   12 x 15   ☐

6   45 x 6   ☐

7   35 x 8   ☐

8 $\frac{1}{3}$ of 21   ☐

9 $\frac{1}{7}$ of 56   ☐

10 $\frac{1}{5}$ of 45   ☐

11   How much water is in this jug?   ☐

12   How much more water is needed to fill this jug to the 2 L mark?   ☐

2 L
1500 mL
1 L
500 mL

13   53 x 1000 =   ☐

14   6100 ÷ 10 =   ☐

15   Which digit is in the ten thousands place in 54 321?   ☐

16   Which of these numbers has the greater value, 98 890 or 98 980?   ☐

17   How many minutes in a $\frac{1}{4}$ hour?   ☐

18 $\frac{1}{2}$ a day is equal to:
   ◯ 6 hours   ◯ 12 hours   ◯ 18 hours

19   Which pirate ship is east of the island?   ☐

20   Which pirate ship is west of Phantom?   ☐

Pirate Ships

	A	B	C	D	E
1	Shadow	Phantom			Fury
2					
3	N				Tempest
4	Rebellion				
5				Dreadlock	

Q1–10:	/10	Q11–20:	/10	My time:

Think Box

Calculator Story

Right-o, shipmates! Use your calculator to solve the clues below. For each answer, turn your calculator upside down and write the word in the story.

Clues

1   1538 x 3

2   1640 + 2111

3   2345 ÷ 7

4   8028 − 7514

5   10 x 27 679 x 2

6   3923 x 96

7   4112 ÷ 8

8   5000 + 999 + 76

9   555 555 − 20 041

10   8 x 672 351

11   28 554 + 28 554

12   1000 − 382

13   615 293 x 9

14   493 + 166 + 74

15   6677 ÷ 11

16   213 803 x 25

17   53 400 − 355

18   15 428 ÷ 2

19   4304 + 1000

20   0.2 x 3.869

21   926 x 4

22   7777 − 672

23   105 280 ÷ 28

24   5000 + 500 + 7

Captain Blackbeard, the most feared pirate on the **1**_____ seas, yells, "Land ho! 'Tis the Treasure **2**_____ I **3**_____!" Captain Blackbeard and **4**_____ crew set anchor and row to the jungle island. Untold riches will **5**_____ any pirate and **6**_____ **7**_____ mind. Blackbeard curses himself for choosing the jungle as the hiding place for the treasure.

The pirates **8**_____ their way through a steamy swamp as a snake **9**_____ overhead. The ooze **10**_____ and **11**_____ , but the crew dares not grumble, even when a **12**_____ **13**_____ **14**_____ slithers over a **15**_____ and **16**_____ into the murky waters beneath their **17**_____ .

Following Blackbeard's map the crew stops on a low, grassy **18**_____ . "Grab the shovels and **19**_____ and dig, me hearties!" **20**_____ws the Captain. Within minutes a huge chest is hoisted out of the **21**_____ and dumped beside the mound of **22**_____ . Captain Blackbeard breaks the lock and throws open the lid. Captain and crew alike stand and **23**_____ the sight, at a **24**_____ for words. Before them is a dazzling array of gold, jewels and pearls beyond imagination!