

Think MENTALSTM

6



Maths Strategies and Practice

Student Workbook Sample Pages

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firefly
EDUCATION

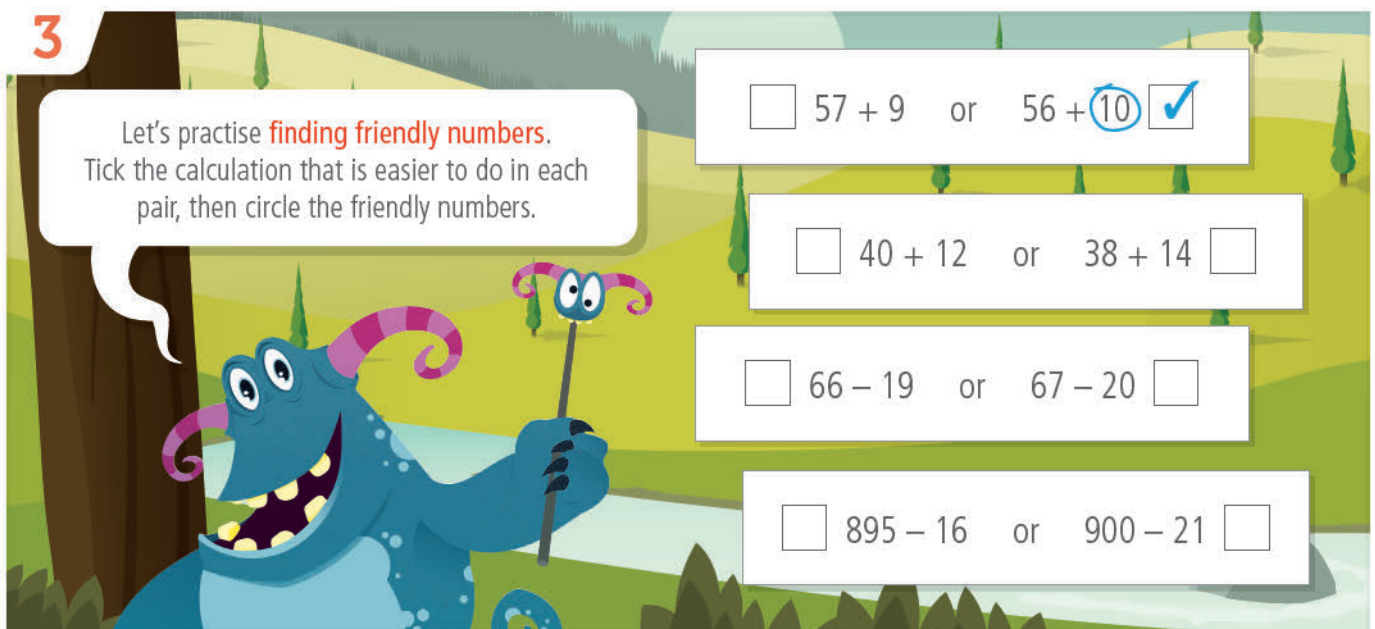
1



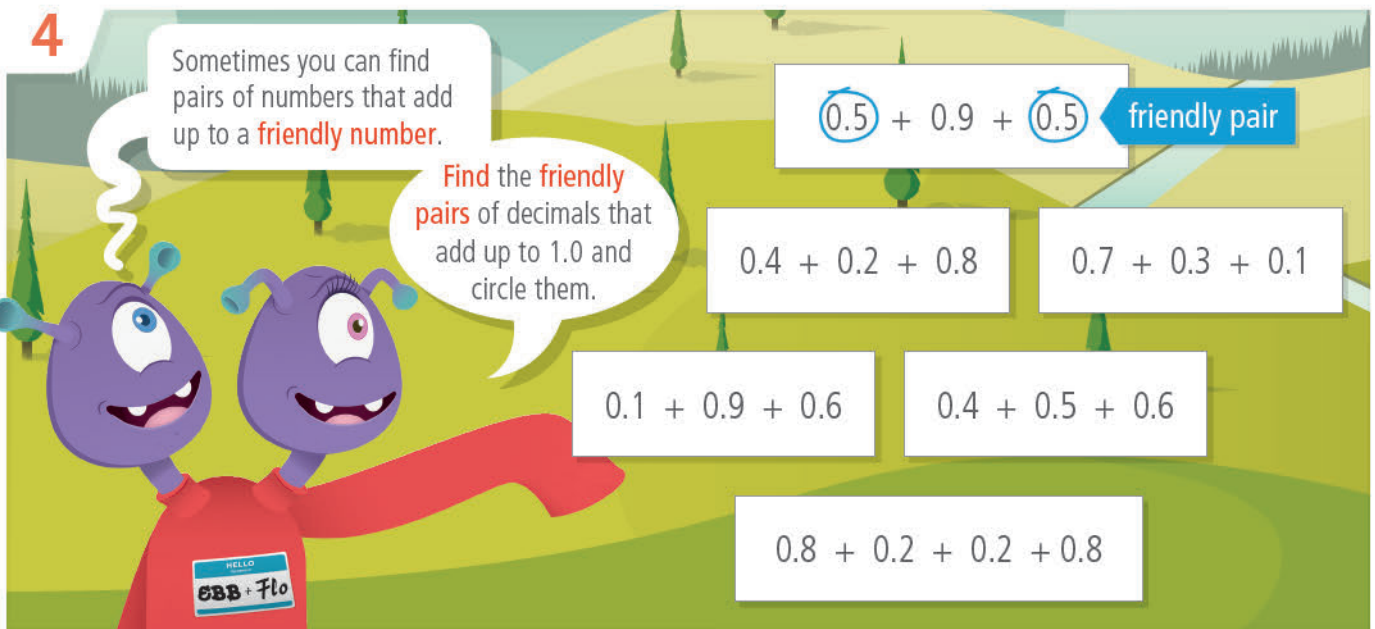
2



3



4



5

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

$128 + 19$

?

$95 + 17$

$46 - 9$

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.

$\textcircled{49} + 35$

$61 + 85$

$477 + 302$

$397 + 144$

7

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

change

friendly

49

+1

50

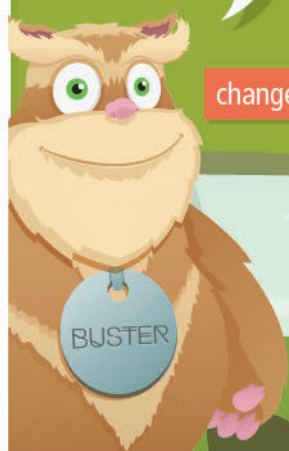
61

302

397

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.



change

$$\begin{array}{r} 49 + 35 \\ \text{change} \rightarrow \begin{array}{|c|c|} \hline +1 & -1 \\ \hline \end{array} \rightarrow \begin{array}{r} 50 + 34 \end{array} \end{array}$$

fix

$$\begin{array}{r} 61 + 85 \\ \text{fix} \rightarrow \begin{array}{|c|c|} \hline -1 & \\ \hline \end{array} \rightarrow \begin{array}{r} 60 + \square \end{array} \end{array}$$

$$\begin{array}{r} 477 + 302 \\ \text{fix} \rightarrow \begin{array}{|c|c|} \hline & -2 \\ \hline \end{array} \rightarrow \begin{array}{r} \square + 300 \end{array} \end{array}$$

$$\begin{array}{r} 397 + 144 \\ \text{fix} \rightarrow \begin{array}{|c|c|} \hline +3 & \\ \hline \end{array} \rightarrow \begin{array}{r} 400 + \square \end{array} \end{array}$$

9



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

Can you **make** these numbers friendly?

$$265 = 200 + 60 + 5$$

$$714 =$$

$$382 =$$

$$950 =$$

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 ☐



11

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

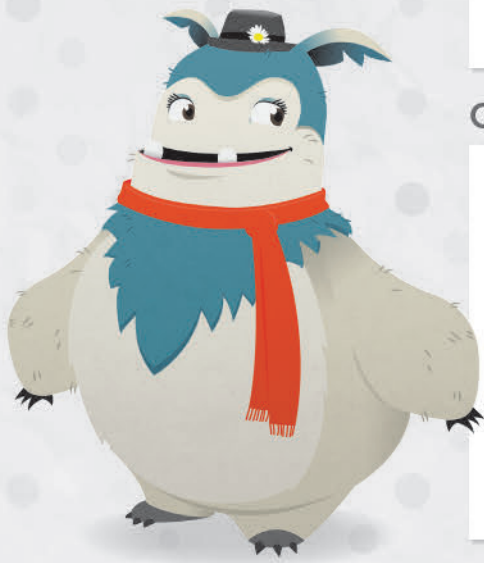




Addition
Strategy

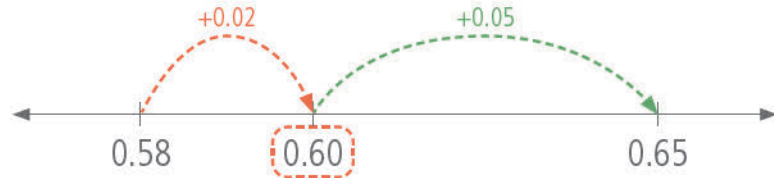
Friendly Jumps

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



1 Jump forward to a friendly number.

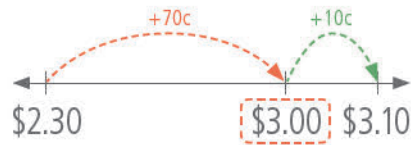
$$0.58 + 0.07$$



2 Jump forward the rest.

Other Examples

$$\$2.30 + 80c$$



$$\$4.50 + 65c$$



Day 1

1 $\$4.50 + 70c$

2 $180 + 60$

3 $960 + 75$

4 $0.37 + 0.04$

5 $698 + 22$

6 $0.95 + 0.08$

7 $\$4.40 + 65c$

8 $130 + 85$

9 $0.57 + 0.06$

10 How much is a pie with sauce?

pie \$5.80
Chips \$4.30
Sauce 25c
Drink \$3.00

11 $\$2.40 + 70c$

12 $1155 + 6$

13 $8.32 + 0.09$

14 $0.28 + 0.07$

15 $\$6.50 + 65c$

16 $\$3.97 + 6c$

17 $\$1.80 + 70c$

18 $12.57 + 0.04$

19 $230 + 77$

20 The school high jump record is 1.28 m and Ashton beat the record by 0.08 m. What is the new record height?

Practice

Q1–20:

/20

My time:

Day 2

1 $150 + 80$

2 $\$4.70 + 60c$

3 $3.5 + 0.7$

4 $9.25 + 0.06$

5 $\$3.30 + 80c$

Practice

6 60×300

7 400×4

8 $200 - 55$

9 $350 - 60$

10 $\frac{1}{3}$ of 21

Revision

11 Write kilometres in abbreviated form.

12 Write three million as a numeral.

13 What is the next number in this pattern?

3.4 4.1 4.8 5.5

14 What is the repeated gap in the pattern?

 $\bigcirc + 7$ $\bigcirc + 0.7$ $\bigcirc + 0.07$

15 Which of these numbers has the greater value?

 $\bigcirc 4\ 000\ 200$ $\bigcirc 900\ 200$

16 Which digit is in the thousands place in 34 217 900?

17 Write the measurement that is abbreviated as kg in word form.

18 Which of the labelled cities in Japan is located the furthest north?

19 Which city is at map reference D4?

20 What is the compass direction from Kyoto to Hiroshima?

Day 3

1 $380 + 45$

2 $\$7.70 + 50c$

3 $510 + 95$

4 $0.87 + 0.06$

5 $3.3 + 0.8$

Practice

6 900×50

7 70×70

8 $\$240 - \80

9 $500 - 55$

10 $\frac{1}{8}$ of 32

Revision

11 Write sixty million as a numeral.

12 Name the compass point midway between south and east.

13 What is the next number in this pattern?

0.08 0.11 0.14 0.17

14 What is the repeated gap in the pattern?

 $\bigcirc + 3$ $\bigcirc + 0.3$ $\bigcirc + 0.03$

15 Write the measurement that is abbreviated as mm in word form.

16 Write centimetres in abbreviated form.

17 Which digit is in the millions place in 75 600 318?

18 Which of these numbers has the greater value?

 $\bigcirc 55\ 500$ $\bigcirc 500\ 500$

19 How many zeros are used to write ten million as a numeral?

20 Write the map reference for Sendai.



Q1–10:

/10

11–20:

/10

My time:

Q1–10:

/10

11–20:

/10

My time:

Day 4

1 $\$1.80 + 55c$

2 $660 + 60$

3 $7.6 + 0.5$

4 $0.95 + 0.25$

5 $\$8.90 + 60c$

Practice

6 70×3000

7 200×50

8 $950 - 60$

9 $520 - 40$

10 $\frac{1}{4}$ of 28

Revision

11 Which of these numbers has the greater value?

☐ 200 000 200 ☐ 80 000 80012 Write millilitres in abbreviated form.

13 Write nine hundred million as a numeral.

14 The thickness of the wire on a paperclip is about:

☐ 1 mm ☐ 1 cm ☐ 1 m ☐ 1 km

15 What is the next number in this pattern?

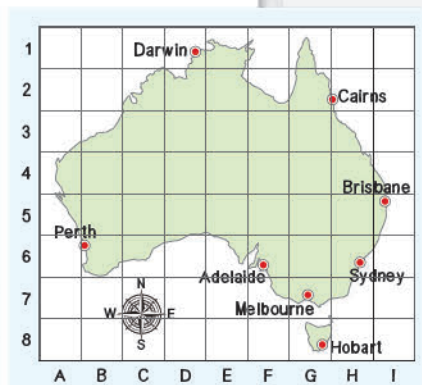
0.10 0.25 0.40 0.55 16 What is the repeated gap in the pattern?

17 Write forty-four million as a numeral.

18 Which digit is in the ten thousands place in 627 930?

19 A flight from Sydney to Adelaide to Hobart travels in which two directions?

20 Which three cities have a map reference ending with 6?



Day 5

1 $0.48 + 0.07$

2 $\$3.50 + 80c$

3 $\$10.90 + 50c$

4 $0.95 + 0.15$

5 $0.29 + 0.09$

6 $\$1.60 + 45c$

7 $5.5 + 0.6$

8 $480 + 40$

9 $\$8.80 + 25c$

10 $\$2.30 + 80c$

Assessment

11 What is the next number in this pattern?

0.82 0.87 0.92 0.97 12 What is the repeated gap in the pattern? 13 Write eight hundred and twenty-one million as a numeral. 14 Write kilograms in abbreviated form.

15 Which of these numbers has the greater value?

☐ 337 300 ☐ 73 70016 Which digit is in the hundred thousands place in 77 195 820?

17 A jelly bean has a mass of about:

☐ one gram ☐ one kilogram ☐ one tonne

18 Which of the labelled cities is located the furthest south?

19 What is the compass direction from Cairns to Perth?

20 Which state capital is north-west of Melbourne?

Q1–10: /10

11–20: /10

My time:

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.

3 Calculate.

$$0.98 + 0.85$$

move 0.02

$$= 1.00 + 0.83$$

$$= 1.83$$

Other Examples

$$14.4 + 2.7$$

move 0.3

$$= 14.1 + 3.0$$

$$= 17.1$$

$$\$6.75 + \$5.30$$

move 25c

$$= \$7.00 + \$5.05$$

$$= \$12.05$$

Day 1

1 $0.99 + 0.26$

2 $5.2 + 2.9$

3 $\$1.75 + 50c$

4 $598 + 55$

5 $\$1.95 + \1.25

6 $0.98 + 0.17$

7 $290 + 320$

8 $\$8.90 + \1.20

9 $69 + 71$

10 Hal's height is 139 cm.
Buster is 21 cm taller.

What is Buster's height?

11 $490 + 510$

12 $5.2 + 1.9$

13 $\$4.80 + \1.30

14 $151 + 149$

15 $299 + 201$

16 $7.9 + 8.1$

17 $99c + 46c$

18 $\$2.55 + \2.45

19 $695 + 205$

20 Gianna swam her first 50 m lap in 24 seconds and her second lap in 26 seconds. How long did Gianna take to swim 100 m?

Practice

Day 2

1 $98c + 52c$

2 $4.9 + 2.1$

3 $0.51 + 0.49$

4 $\$7.90 + \1.10

5 $89 + 91$

Practice

6 99×3

7 99×5

8 $84 - 39$

9 $67 - 29$

10 $\frac{1}{6}$ of 18

Revision

- 11 Calculate the perimeter of this blue rectangle.



- 12 What is its area?

- 13 Round 6296 to the nearest hundred.

- 14 Round 6296 to the nearest thousand.

- 15 Name the compass point midway between north and east.

- 16 Which direction is a quarter turn anticlockwise from north?

- 17 Circle the four factors of 15.

1 2 3 5 8 10 15

- 18 List the four factors of 8.

- 19 When does the Sydney Ferry stop at Taronga Zoo on Monday?

- 20 How long does the ferry journey between Manly and Taronga Zoo take?

Sydney Ferry Company					
Afternoon services	Circular Quay	Manly	Taronga Zoo	Darling Harbour	Circular Quay
Monday	3:00 pm	3:30 pm	4:00 pm	5:10 pm	5:20 pm
Tuesday	3:00 pm	3:30 pm			4:55 pm
Wednesday	3:00 pm	3:30 pm	4:00 pm	5:10 pm	5:20 pm
Thursday	3:00 pm	3:30 pm			4:55 pm
Friday	3:00 pm	3:30 pm	4:00 pm	5:10 pm	5:20 pm

Day 3

1 $0.98 + 0.66$

2 $\$4.20 + \3.80

3 $595 + 605$

4 $\$7.75 + 50c$

5 $0.19 + 0.21$

Practice

6 999×2

7 999×7

8 $490 - 95$

9 $605 - 295$

10 $\frac{1}{9}$ of 81

Revision

- 11 Round 8845 to the nearest 100.

- 12 Round 8845 to the nearest 1000.

- 13 Calculate the perimeter of a picture frame measuring 30 cm by 40 cm.

- 14 Work out the area of the glass for a picture frame with the same dimensions.

- 15 Name the compass point midway between south-east and south-west.

- 16 Which direction is opposite north-west?

- 17 List the six factors of 50.

- 18 On which days does the Sydney Ferry stop at Taronga Zoo and Darling Harbour?

- 19 Can you catch a ferry from Circular Quay to Darling Harbour on Thursday?

- 20 What time does the ferry arrive at Darling Harbour on Wednesday?

Q1–10:

/10

11–20:

/10

My time:

Q1–10:

/10

11–20:

/10

My time:

Day 4

1 $28c + 32c$

2 $6.9 + 7.1$

3 $\$3.95 + \1.05

4 $0.99 + 0.51$

5 $590 + 210$

Practice

6 4×999

7 8×99

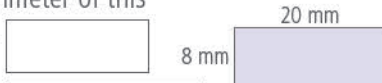
8 $93 - 48$

9 $82 - 19$

10 $\frac{1}{7}$ of 56

Revision

- 11 Calculate the perimeter of this purple rectangle.



- 12 What is its area?

- 13 The distance from Sydney to L.A. is 12 065 km. Round it to the nearest 100 km.

- 14 Round the flight distance from Sydney to L.A. to the nearest 1000 km.

- 15 List the four prime numbers between 10 and 20.

- 16 List the eight factors of 40.

- 17 Which direction is a
- $\frac{1}{4}$
- turn anticlockwise from north-west?

- 18 How far is ten laps around a sports field that is 100 m long and 50 m wide?

- 19 How long does the round trip from Circular Quay to Circular Quay take on Tuesday?

- 20 How much travel time is saved on the round trip on Tuesday compared to Wednesday?

Afternoon services	Circular Quay	Manly	Taronga Zoo	Darling Harbour	Circular Quay
Monday	3:00 pm	3:30 pm	4:00 pm	5:10 pm	5:20 pm
Tuesday	3:00 pm	3:30 pm			4:55 pm
Wednesday	3:00 pm	3:30 pm	4:00 pm	5:10 pm	5:20 pm
Thursday	3:00 pm	3:30 pm			4:55 pm
Friday	3:00 pm	3:30 pm	4:00 pm	5:10 pm	5:20 pm

Day 5

1 $0.24 + 0.26$

2 $5.4 + 4.9$

3 $\$2.95 + 90c$

4 $\$8.90 + \1.10

5 $99c + 39c$

6 $245 + 255$

7 $4.8 + 1.2$

8 $\$4.95 + \3.55

9 $\$5.75 + 50c$

10 $698 + 702$

Assessment

- 11 Round 5150 to the nearest hundred.

- 12 Round 5150 to the nearest thousand.

- 13 Write the two prime numbers between 20 and 30.

14 $\frac{1}{8}$ of 64 =

- 15 Calculate the perimeter of a swimming pool measuring 5 m by 10 m.

- 16 What is the area of a swimming pool with the same dimensions?

- 17 Circle the six factors of 18.

1 2 3 6 9 12 18

- 18 What time on Friday does the Sydney Ferry reach Darling Harbour?

- 19 How long does the ferry journey between Taronga Zoo and Circular Quay take?

- 20 The ferry left Manly 10 minutes late on Tuesday. When should it be expected at Circular Quay?

Q1–10:

/10

11–20:

/10

My time:

Q1–10:

/10

11–20:

/10

My time:

Day 1

- 1 $\$5.50 + 70c$
- 2 $280 + 60$
- 3 $970 + 35$
- 4 $0.87 + 0.04$
- 5 $198 + 22$
- 6 $0.95 + 0.06$
- 7 $10.52 + 0.09$
- 8 $0.78 + 0.07$
- 9 $1050 + 60$
- 10 $460 + 65$

Revision

- 11 The inverse of $\square \times 4 = 120$ is $120 \div 4 = \square$.
Write the inverse of $\square \times 7 = 420$, then solve.

- 12 Write the inverse of $\square \times 6 = 480$, then solve.

- 13 Which shape shows a flip to the right?



- 14 Which shape shows a slide to the right?



- 15 Which shape shows a quarter-turn clockwise?



- 16 Write the probability of tossing a coin for tails as a fraction.

- 17 Write as a fraction the probability of winning a raffle in which 5000 tickets were sold and you bought three tickets.

- 18 Marcy bought a box of cupcake mix for \$4.45. How much change from \$5 should she get?

- 19 Draw two more notes to make the total exactly \$50.



- 20 What is the size of this angle?

☐ 60° ☐ 120° ☐ 180°



Day 2

- 1 $\$8 - \1.15
- 2 $3 - 0.45$
- 3 $\$10 - \1.50
- 4 $\$1.80 - 55c$
- 5 $\$10 - \5.50
- 6 $1 - 0.65$
- 7 $\$20 - \3.50
- 8 $\$1.70 - 15c$
- 9 $2000 - 250$
- 10 $600 \text{ mL} - 350 \text{ mL}$

Revision

- 11 Write the inverse of $\square \times 30 = 210$, then solve.

- 12 Write the inverse of $\square \div 50 = 8$, then solve.

- 13 What is the change from \$20 if an item costs \$18.50?

- 14 What is the size of this angle?

☐ 70° ☐ 110° ☐ 180°



- 15 How many 50c coins make \$8?

- 16 Write the probability of choosing a green ball from this bag as a fraction.



- 17 Write the probability of choosing a pink ball from the bag as a simplified fraction.

- 18 Which shape shows a flip to the right?



- 19 Which shape shows a slide to the right?



- 20 Which shape shows a quarter-turn anticlockwise?



Q1–10:

/10

11–20:

/10

My time:

Q1–10:

/10

11–20:

/10

My time:

Day 3

- 1 12×35
- 2 $\$1.50 \times 6$
- 3 55×16
- 4 $8 \times \$3.50$
- 5 5.5×14
- 6 $18 \times \$5.50$
- 7 35×140
- 8 $\$1.50 \times 16$
- 9 3.5×120
- 10 45×18

Revision

- 11 Write the inverse of $\square \times 9 = 360$, then solve.

- 12 Write the inverse of $\square \div 70 = 70$, then solve.

- 13 Amelia paid \$3.50 for her fruit salad.
How much change from \$10 should she get?

- 14 What is the size of this angle?

☐ 40° ☐ 90° ☐ 140°



- 15 How many 20c coins make \$9?

- 16 Write the probability of not choosing a green ball from this bag as a fraction.



- 17 What is the change from \$50 for two footy tickets that cost \$21.50 each?

- 18 Which shape shows a flip to the right?



- 19 Which shape shows a slide to the right?



- 20 Which shape shows a quarter-turn anticlockwise?



Day 4

- 1 50% of 52 weeks
- 2 50% of 10 000
- 3 25% of 60 min
- 4 10% of 700
- 5 10% of 15 kg
- 6 50% of 1 day
- 7 50% of 150 m
- 8 25% of 48
- 9 10% of 5000
- 10 10% of \$10

Revision

- 11 Which shape shows a flip to the right?



- 12 Which shape shows a slide to the right?



- 13 Which shape shows a quarter-turn clockwise?



- 14 How many 50c coins make \$15?

- 15 Write the inverse of $\square \div 90 = 90$, then solve.

- 16 Write the inverse of $\square \div 0.5 = 0.5$, then solve.

- 17 What is the size of this angle?

☐ 30° ☐ 150° ☐ 180°



- 18 Write the probability of rolling a 6-sided dice for a 5 as a fraction.



- 19 Write the probability of rolling the same dice for an even number as a simplified fraction.

- 20 Thi has one of every Australian coin except one. Her total is \$3.75. Which coin doesn't Thi have?

Q1–10:

/10

11–20:

/10

My time:

Q1–10:

/10

11–20:

/10

My time:

Day 5

1 $850 + 70$

2 $0.55 + 0.06$

3 $3 - 0.65$

4 $\$20 - \5.50

5 15×140

6 $\$1.50 \times 12$

7 3.5×16

8 10% of 300

9 25% of 28 days

10 50% of 160 km

11 Aydan bought his lunch for \$11.90. How much change from \$20 should he get?

12 Write the probability of choosing a yellow ball from this bag as a simplified fraction.



13 Write the probability of winning a raffle in which 1000 tickets were sold and you bought 3 tickets.

14 Which shape shows a flip to the right?



15 Which shape shows a slide to the right?



16 Which shape shows a quarter turn anticlockwise?

17 Write the inverse of $\square \div 40 = 8$, then solve.

18 Write the inverse of $\square \times 7 = 350$, then solve.

19 How many 20c coins make \$3?

20 What is the size of this angle?

☐ 50° ☐ 130° ☐ 180°


Assessment

Q1–10:

/10

Q11–20:

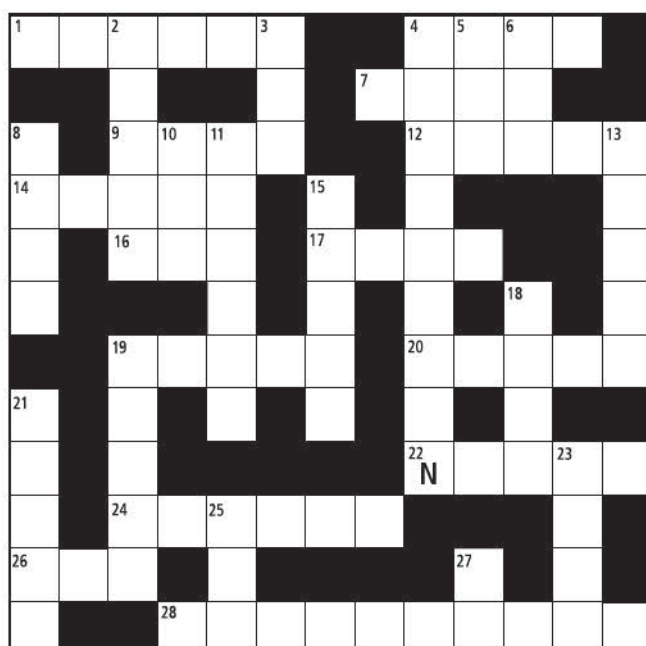
/10

My time:

Think Box

Calculator Flipword

Use the maths clues to help you complete this crossword. Solve each clue with your calculator, then flip the calculator to read the word.



Across

- 1 $267\,754 + 267\,754 =$ people in charge
 4 $10\,000 - 4486 =$ snake sound
 7 $926 \times 4 =$ an opening
 9 $5700 - 37 =$ laid by hens
 12 $27\,689 \times 2 =$ God you
 14 $0.07 + 0.0061 =$ Inuit ice home
 16 $4249 \div 7 =$ tree trunk
 17 $154 \times 20 =$ musical instrument
 19 $69\,411 - 11\,695 =$ used by fish to breathe
 20 $70\,014 \div 2 =$ not tight
 22 $50 \times 70 =$ hangman's rope
 24 $810 + 7008 + 530\,000 =$ Christian books
 26 $3487 \div 11 =$ tell untruths
 28 $5\,461\,375\,808 =$ toboggans

Down

- 2 $232\,035 \div 3 =$ oyster case
 3 $101 \times 5 =$ distress signal
 4 $8\,903\,402 \times 2 =$ underground fantasy creature
 5 $1000 - 229 =$ sick
 6 $19 + 78 + 65 + 173 =$ look
 8 $385\,700 \div 50 =$ small mountain
 10 $0.051 + 0.009 =$ sticky stuff
 11 $188\,303 \times 2 =$ eye protector
 13 $6427 \times 5 =$ take by force
 15 $600 \times 50 + 5006 =$ lays the golden egg
 18 $14.568 \div 24 =$ symbol
 19 $50\,000 - 11\,924 =$ sphere
 21 $14\,277 \times 4 =$ heats to 100°C
 23 $610 + 4005 =$ heavy breath
 25 $0.04 + 0.04 =$ scare
 27 $2 + 10 + 2 =$ hello