Vertex Academy

Year 2 Maths workbook

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Year 2 Maths: Numbers to 120: Read, Write and Compare

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. Write one hundred and twelve in numerals.

2. How many tens and ones are in 64?

3. Which is bigger, 98 or 101?

4. Put these in order, smallest first: 72, 27, 107.

5. What number is rua tekau mā rima?

Spot the mistake

6. What is wrong? "One hundred and six is written 1006."

7. What is wrong? "57 is bigger than 75, because 7 is bigger than 5."

8. What is wrong? "After 109 comes 200."

Year 2 Maths: Groups of Ten and Where Numbers Sit on a Line

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. What is the 9 worth in 93?

2. How many tens make 100?

3. There are 8 piles of ten shells and 3 more shells. How many shells?

4. On a line marked in tens, 58 sits between which two numbers?

5. Write 114 in words.

Spot the mistake

6. What is wrong? "In 38, the 3 is worth 3."

7. What is wrong? "Count a big pile one shell at a time."

8. What is wrong? "61 goes halfway between 60 and 70."

Year 2 Maths: Rounding, Skip Counting, Odd and Even

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. Round 76 to the nearest ten.

2. Is 113 odd or even?

3. Count on in 3s: 12, 15, 18, ?

4. Count back in 10s: 96, 86, 76, ?

5. Which number is in both the 2s count and the 5s count: 15, 20 or 25?

Spot the mistake

6. What is wrong? "45 rounds to 40."

7. What is wrong? "107 is even, because it has a 0 in it."

8. What is wrong? "Counting back in 5s from 42: 42, 37, 33."

Year 2 Maths: Adding and Taking Away: Facts to 20 and Tens

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. 14 + 6 = ?

2. What is half of 16?

3. 45 + 30 = ?

4. 67 – 4 = ?

5. 8 + 5 + 2 = ?

Spot the mistake

6. What is wrong? "32 + 20 = 34"

7. What is wrong? "Half of 18 is 8."

8. What is wrong? "13 – 5 = 7"

Year 2 Maths: Story Problems: Adding and Taking Away to 100

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. 100 + 9 = ?

2. Tama has 54 marbles. He gets 32 more. How many does he have now?

3. There were 85 apples. 40 were eaten. How many are left?

4. 15 birds sit on a fence. 6 fly away, then 4 more land. How many birds now?

5. Ana has 8 stickers. She gets 9 more, then gives 5 away. How many does she have?

Spot the mistake

6. What is wrong? "100 + 6 = 1006"

7. What is wrong? "Taking away when the story says altogether."

8. What is wrong? "Stopping after the first step of a two-step story."

Year 2 Maths: Times and Share: 2s, 5s and 10s

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. 7 × 2 = ?

2. 4 × 5 = ?

3. 60 ÷ 10 = ?

4. 9 × 1 = ?

5. 35 ÷ 5 = ?

Spot the mistake

6. What is wrong? "6 × 0 = 6, just like 6 + 0."

7. What is wrong? "10 ÷ 2 is the same as 2 ÷ 10."

8. What is wrong? "3 × 5 means 3 + 5."

Year 2 Maths: Halves, Thirds and Quarters

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. A cake is cut into 4 equal pieces. What is one piece called?

2. In 2/3, how many equal parts are in the whole?

3. Write three quarters as a fraction.

4. 8 shells are put in 2 equal groups. How many shells are in 1/2?

5. Is 2/4 more than, less than, or the same as 1/2?

Spot the mistake

6. What is wrong? "Any 2 pieces are halves."

7. What is wrong? "In 1/4, the 4 means 4 pieces are coloured."

8. What is wrong? "2/4 is more than 1/2, because 2 is more than 1."

Year 2 Maths: Comparing Fractions and Finding the Whole

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. Which is bigger, 1/2 or 1/3?

2. Which is bigger, 1/4 or 3/4?

3. What is 1/4 of 20?

4. 1/3 of a bag of lollies is 4 lollies. How many lollies are in the whole bag?

5. Half a fence is 9 m long. How long is the whole fence?

Spot the mistake

6. What is wrong? "1/4 is bigger than 1/3, because 4 is bigger than 3."

7. What is wrong? "If half is 6, the whole is 3."

8. What is wrong? "To find a quarter, halve once."

Year 2 Maths: NZ Coins and Notes: Count and Make Money

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. Which is worth more, 50c or $1?

2. How much are three $2 coins?

3. How much are four 20c coins?

4. Which two notes make $25?

5. Put in order, smallest value first: $10, $5, $50.

Spot the mistake

6. What is wrong? "The 50c coin is worth more than the $1 coin, because it is bigger."

7. What is wrong? "Five 10c coins make 5c."

8. What is wrong? "A $20 note and a $10 note make $2, because there are 2 notes."

Year 2 Maths: True or False? Number Sentences and Gaps

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. True or false: 45 > 54?

2. True or false: 5 + 5 = 2 × 5?

3. 8 ÷ ? = 4. What is the missing number?

4. 9 + ? = 8 + 4. What is the missing number?

5. ? × 10 = 70. What is the missing number?

Spot the mistake

6. What is wrong? "In 18 + ? = 17 + 6, the missing number is 23."

7. What is wrong? "16 > 60 is true."

8. What is wrong? "2 + 2 + 2 = 3 × 2 is false, because the signs are different."

Year 2 Maths: Repeating Patterns and What Comes Next

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. Which sentence is true: 47 < 74, 47 > 74, 74 < 47 or 47 = 74?

2. What is the unit of repeat in star, moon, moon, star, moon, moon?

3. In the pattern A, B, A, B, what is the 7th letter?

4. In ACDCACDC, what is the 10th letter?

5. What comes next: red, red, green, red, red, ?

Spot the mistake

6. What is wrong? "The unit of repeat in ACDCACDC is AC."

7. What is wrong? "12 > 21, because 12 comes first."

8. What is wrong? "Guessing the 10th piece from the last one you can see."

Year 2 Maths: Measuring Length, Mass and Capacity

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. Which unit tells how much a cup holds: cm, g or mL?

2. A pencil is 7 paper clips long. A crayon is 4 paper clips long. Which is longer?

3. Order shortest to longest: ruler 30 cm, shoe 18 cm, pencil 12 cm.

4. Kitchen scales show 500 g for a bag of rice. What is its mass?

5. Why is cm better than hand spans for telling a friend how long something is?

Spot the mistake

6. What is wrong? "Leaving gaps between the paper clips."

7. What is wrong? "Starting the ruler at the 1."

8. What is wrong? "Mixing big and small blocks when measuring."

Year 2 Maths: Perimeter and Turns

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. A triangle has sides of 3 cm, 4 cm and 5 cm. What is its perimeter?

2. A square has sides of 2 cm. What is its perimeter?

3. Is a circle a polygon?

4. A clock hand points at 12. It makes a half turn clockwise. Where does it point now?

5. You face the door and make a full turn. What do you face now?

Spot the mistake

6. What is wrong? "The perimeter of a 5 cm by 3 cm rectangle is 8 cm."

7. What is wrong? "A circle is a polygon."

8. What is wrong? "A quarter turn clockwise and a quarter turn anticlockwise end in the same place."

Year 2 Maths: Time: Clocks, Months and Seasons

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. What month comes after March?

2. What is the 10th month of the year?

3. How many minutes are in half an hour?

4. The long hand is on 12 and the short hand is on 7. What time is it?

5. Which season is July in, in New Zealand?

Spot the mistake

6. What is wrong? "Half past 4 is 4:50."

7. What is wrong? "The short hand shows the minutes."

8. What is wrong? "Winter in New Zealand is in December."

Year 2 Maths: Shapes, Flips and Turns, and Finding Your Way

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. How many sides does a hexagon have?

2. What is triangle in te reo Māori?

3. Which solid has a circle at the bottom and a point at the top?

4. You face the gate and make a half turn. Which way do you face now?

5. A shape moves along without flipping or turning. What is that move called?

Spot the mistake

6. What is wrong? "A square turned onto its corner is a new shape."

7. What is wrong? "A cone is a kind of pyramid."

8. What is wrong? "A quarter turn and a half turn face the same way."

9. What is wrong? "A map shows things from the side."

Year 2 Maths: Collecting Data and Making Tally Charts

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. In the question "What is your favourite fruit?", what is the variable?

2. A tally shows one gate and 3 more marks. How many is that?

3. Only 1 student says guinea pig for favourite pet. Which category can it go in?

4. Dog has 6 tallies and cat has 4. How many more students chose dog?

5. Is colour of your bag a categorical variable?

Spot the mistake

6. What is wrong? "Making a new category for every rare answer."

7. What is wrong? "Drawing the 5th tally mark next to the other four."

8. What is wrong? "Asking "What do you like?" with no choices."

Year 2 Maths: Picture Graphs and Dot Plots

Name: _____ Date: _____

Have a go first, then check the answers with a grown-up.

Practice

1. Use the Room 4 dot plot. How many students walk?

2. Which way to school is the most common?

3. Which way to school is the least common?

4. How many more students come by car than by bus?

5. How many students are in the dot plot altogether?

Spot the mistake

6. What is wrong? "Drawing some dots bigger than others."

7. What is wrong? "Saying "car is 7" with nothing else."

8. What is wrong? "The category on the left has the most."

Answer key (for parents and tutors)

1. Write one hundred and twelve in numerals.
   112
2. How many tens and ones are in 64?
   6 tens and 4 ones
3. Which is bigger, 98 or 101?
   101
4. Put these in order, smallest first: 72, 27, 107.
   27, 72, 107
5. What number is rua tekau mā rima?
   25
6. What is wrong? "One hundred and six is written 1006."
   Write 106: 1 hundred, 0 tens and 6 ones.
7. What is wrong? "57 is bigger than 75, because 7 is bigger than 5."
   Look at the tens first. 75 has 7 tens and 57 has only 5 tens, so 75 is bigger.
8. What is wrong? "After 109 comes 200."
   After 109 comes 110, just as 10 comes after 9.

Answer key (for parents and tutors)

1. What is the 9 worth in 93?
   90
2. How many tens make 100?
   10
3. There are 8 piles of ten shells and 3 more shells. How many shells?
   83
4. On a line marked in tens, 58 sits between which two numbers?
   50 and 60, close to 60
5. Write 114 in words.
   one hundred and fourteen
6. What is wrong? "In 38, the 3 is worth 3."
   The 3 is in the tens place, so it is worth 30.
7. What is wrong? "Count a big pile one shell at a time."
   Make groups of ten first. Count the tens, then add the ones left over.
8. What is wrong? "61 goes halfway between 60 and 70."
   61 is only 1 more than 60, so it goes just after 60.

Answer key (for parents and tutors)

1. Round 76 to the nearest ten.
   80
2. Is 113 odd or even?
   odd
3. Count on in 3s: 12, 15, 18, ?
   21
4. Count back in 10s: 96, 86, 76, ?
   66
5. Which number is in both the 2s count and the 5s count: 15, 20 or 25?
   20
6. What is wrong? "45 rounds to 40."
   A ones digit of 5 rounds up, so 45 rounds to 50.
7. What is wrong? "107 is even, because it has a 0 in it."
   Only the last digit matters. 107 ends in 7, so it is odd.
8. What is wrong? "Counting back in 5s from 42: 42, 37, 33."
   Take away 5 every time: 42, 37, 32, 27.

Answer key (for parents and tutors)

1. 14 + 6 = ?
   20
2. What is half of 16?
   8
3. 45 + 30 = ?
   75
4. 67 – 4 = ?
   63
5. 8 + 5 + 2 = ?
   15
6. What is wrong? "32 + 20 = 34"
   20 is 2 tens, so the tens digit goes up: 32 + 20 = 52.
7. What is wrong? "Half of 18 is 8."
   Half of 18 is 9, because 9 + 9 = 18.
8. What is wrong? "13 – 5 = 7"
   Check by adding: 8 + 5 = 13, so 13 – 5 = 8.

Answer key (for parents and tutors)

1. 100 + 9 = ?
   109
2. Tama has 54 marbles. He gets 32 more. How many does he have now?
   86
3. There were 85 apples. 40 were eaten. How many are left?
   45
4. 15 birds sit on a fence. 6 fly away, then 4 more land. How many birds now?
   13
5. Ana has 8 stickers. She gets 9 more, then gives 5 away. How many does she have?
   12
6. What is wrong? "100 + 6 = 1006"
   100 + 6 is one hundred and six, written 106.
7. What is wrong? "Taking away when the story says altogether."
   Altogether means put the groups together, so add.
8. What is wrong? "Stopping after the first step of a two-step story."
   Do both steps. The first answer is where the second step starts.

Answer key (for parents and tutors)

1. $7 \times 2 = ?$
   14
2. $4 \times 5 = ?$
   20
3. $60 \div 10 = ?$
   6
4. $9 \times 1 = ?$
   9
5. $35 \div 5 = ?$
   7
6. What is wrong? "$6 \times 0 = 6$, just like $6 + 0$."
   6 × 0 means 6 groups of nothing, so it is 0.
7. What is wrong? "$10 \div 2$ is the same as $2 \div 10$."
   Order matters when you divide. 10 ÷ 2 = 5, but 2 shared between 10 is less than 1 each.
8. What is wrong? "3×5 means $3 + 5$."
   3 × 5 means 3 groups of 5, so it is 15, not 8.

Answer key (for parents and tutors)

1. A cake is cut into 4 equal pieces. What is one piece called?
   one quarter
2. In 2/3, how many equal parts are in the whole?
   3
3. Write three quarters as a fraction.
   3/4
4. 8 shells are put in 2 equal groups. How many shells are in 1/2?
   4
5. Is 2/4 more than, less than, or the same as 1/2?
   the same
6. What is wrong? "Any 2 pieces are halves."
   Halves must be the same size. Two pieces that are not equal are not halves.
7. What is wrong? "In 1/4, the 4 means 4 pieces are coloured."
   The 4 is how many equal parts make the whole. The 1 is the part you count.
8. What is wrong? "2/4 is more than 1/2, because 2 is more than 1."
   2/4 and 1/2 cover the same amount. Quarters are just smaller pieces.

Answer key (for parents and tutors)

1. Which is bigger, 1/2 or 1/3?
   1/2
2. Which is bigger, 1/4 or 3/4?
   3/4
3. What is 1/4 of 20?
   5
4. 1/3 of a bag of lollies is 4 lollies. How many lollies are in the whole bag?
   12
5. Half a fence is 9 m long. How long is the whole fence?
   18 m
6. What is wrong? "1/4 is bigger than 1/3, because 4 is bigger than 3."
   More parts means smaller parts. 1/3 is bigger than 1/4.
7. What is wrong? "If half is 6, the whole is 3."
   Half is one of two equal parts. Double it: the whole is 12.
8. What is wrong? "To find a quarter, halve once."
   A quarter is half of a half, so halve twice. Half of 16 is 8, and half of 8 is 4.

Answer key (for parents and tutors)

1. Which is worth more, 50c or $1?
   $1
2. How much are three $2 coins?
   $6
3. How much are four 20c coins?
   80c
4. Which two notes make $25?
   $20 and $5
5. Put in order, smallest value first: $10, $5, $50.
   $5, $10, $50
6. What is wrong? "The 50c coin is worth more than the $1 coin, because it is bigger."
   Size does not tell the value. $1 is 100 cents, so it is worth more than 50c.
7. What is wrong? "Five 10c coins make 5c."
   Each coin is worth 10c. Count in tens: 10, 20, 30, 40, 50. That is 50c.
8. What is wrong? "A $20 note and a $10 note make $2, because there are 2 notes."
   Add the values, not the number of notes: $20 + $10 = $30.

Answer key (for parents and tutors)

1. True or false: 45 > 54?
   false
2. True or false: 5 + 5 = 2 × 5?
   true
3. 8 ÷ ? = 4. What is the missing number?
   2
4. 9 + ? = 8 + 4. What is the missing number?
   3
5. ? × 10 = 70. What is the missing number?
   7
6. What is wrong? "In 18 + ? = 17 + 6, the missing number is 23."
   23 is the total on the right side. The gap needs 5, so 18 + 5 also makes 23.
7. What is wrong? "16 > 60 is true."
   Read > as is greater than. 16 is not greater than 60, so it is false.
8. What is wrong? "2 + 2 + 2 = 3 × 2 is false, because the signs are different."
   Work out each side. Both are 6, so it is true.

Answer key (for parents and tutors)

1. Which sentence is true: 47 < 74, 47 > 74, 74 < 47 or 47 = 74?
   47 < 74
2. What is the unit of repeat in star, moon, moon, star, moon, moon?
   star, moon, moon
3. In the pattern A, B, A, B, what is the 7th letter?
   A
4. In ACDCACDC, what is the 10th letter?
   C
5. What comes next: red, red, green, red, red, ?
   green
6. What is wrong? "The unit of repeat in ACDCACDC is AC."
   AC is followed by D, not A. The whole unit is ACDC.
7. What is wrong? "12 > 21, because 12 comes first."
   21 has 2 tens and 12 has 1 ten, so 12 < 21.
8. What is wrong? "Guessing the 10th piece from the last one you can see."
   Use the unit. In red, blue, every even place is blue, so the 10th is blue.

Answer key (for parents and tutors)

1. Which unit tells how much a cup holds: cm, g or mL?
   mL
2. A pencil is 7 paper clips long. A crayon is 4 paper clips long. Which is longer?
   the pencil
3. Order shortest to longest: ruler 30 cm, shoe 18 cm, pencil 12 cm.
   pencil, shoe, ruler
4. Kitchen scales show 500 g for a bag of rice. What is its mass?
   500 g
5. Why is cm better than hand spans for telling a friend how long something is?
   A cm is the same for everyone; hand spans are different sizes.
6. What is wrong? "Leaving gaps between the paper clips."
   Line the units up end to end, with no gaps or overlaps, or the count will be wrong.
7. What is wrong? "Starting the ruler at the 1."
   Line the end of the object up with 0.
8. What is wrong? "Mixing big and small blocks when measuring."
   Use units that are all the same size.

Answer key (for parents and tutors)

1. A triangle has sides of 3 cm, 4 cm and 5 cm. What is its perimeter?
   12 cm
2. A square has sides of 2 cm. What is its perimeter?
   8 cm
3. Is a circle a polygon?
   No, its edge is curved
4. A clock hand points at 12. It makes a half turn clockwise. Where does it point now?
   6
5. You face the door and make a full turn. What do you face now?
   the door
6. What is wrong? "The perimeter of a 5 cm by 3 cm rectangle is 8 cm."
   That counts only two sides. A rectangle has four: 5 + 3 + 5 + 3 = 16 cm.
7. What is wrong? "A circle is a polygon."
   Polygons have only straight sides. A circle is curved, so it is not a polygon.
8. What is wrong? "A quarter turn clockwise and a quarter turn anticlockwise end in the same place."
   They go opposite ways. From 12, clockwise ends at 3 and anticlockwise ends at 9.

Answer key (for parents and tutors)

1. What month comes after March?
   April
2. What is the 10th month of the year?
   October
3. How many minutes are in half an hour?
   30
4. The long hand is on 12 and the short hand is on 7. What time is it?
   7 o'clock
5. Which season is July in, in New Zealand?
   winter
6. What is wrong? "Half past 4 is 4:50."
   Half an hour is 30 minutes, so half past 4 is 4:30.
7. What is wrong? "The short hand shows the minutes."
   The long hand shows the minutes. The short hand shows the hour.
8. What is wrong? "Winter in New Zealand is in December."
   In New Zealand, winter is June, July and August. December is in summer.

Answer key (for parents and tutors)

1. How many sides does a hexagon have?
   6
2. What is triangle in te reo Māori?
   tapatoru
3. Which solid has a circle at the bottom and a point at the top?
   a cone
4. You face the gate and make a half turn. Which way do you face now?
   away from the gate
5. A shape moves along without flipping or turning. What is that move called?
   a slide
6. What is wrong? "A square turned onto its corner is a new shape."
   Turning does not change a shape. It is still a square, still tapawhā rite.
7. What is wrong? "A cone is a kind of pyramid."
   A cone has a round base and a curved surface. A pyramid has only flat faces and straight edges.
8. What is wrong? "A quarter turn and a half turn face the same way."
   A quarter turn faces the side. A half turn faces back the way you came.
9. What is wrong? "A map shows things from the side."
   A map shows the view from above, with symbols for things.

Answer key (for parents and tutors)

1. In the question "What is your favourite fruit?", what is the variable?
   favourite fruit
2. A tally shows one gate and 3 more marks. How many is that?
   8
3. Only 1 student says guinea pig for favourite pet. Which category can it go in?
   other
4. Dog has 6 tallies and cat has 4. How many more students chose dog?
   2
5. Is colour of your bag a categorical variable?
   yes, the colours sort into groups
6. What is wrong? "Making a new category for every rare answer."
   Put rare answers like lizard or axolotl together in other.
7. What is wrong? "Drawing the 5th tally mark next to the other four."
   The 5th mark goes across the four. Then you can count in fives.
8. What is wrong? "Asking "What do you like?" with no choices."
   Give a few choices, so the answers fit into a small number of categories.

Answer key (for parents and tutors)

1. Use the Room 4 dot plot. How many students walk?
   5
2. Which way to school is the most common?
   car
3. Which way to school is the least common?
   bus
4. How many more students come by car than by bus?
   4
5. How many students are in the dot plot altogether?
   19
6. What is wrong? "Drawing some dots bigger than others."
   Every dot must be the same size, or the graph tricks the eye.
7. What is wrong? "Saying "car is 7" with nothing else."
   Name the variable and context: 7 students in Room 4 come to school by car.
8. What is wrong? "The category on the left has the most."
   Order does not matter. The tallest stack has the most.