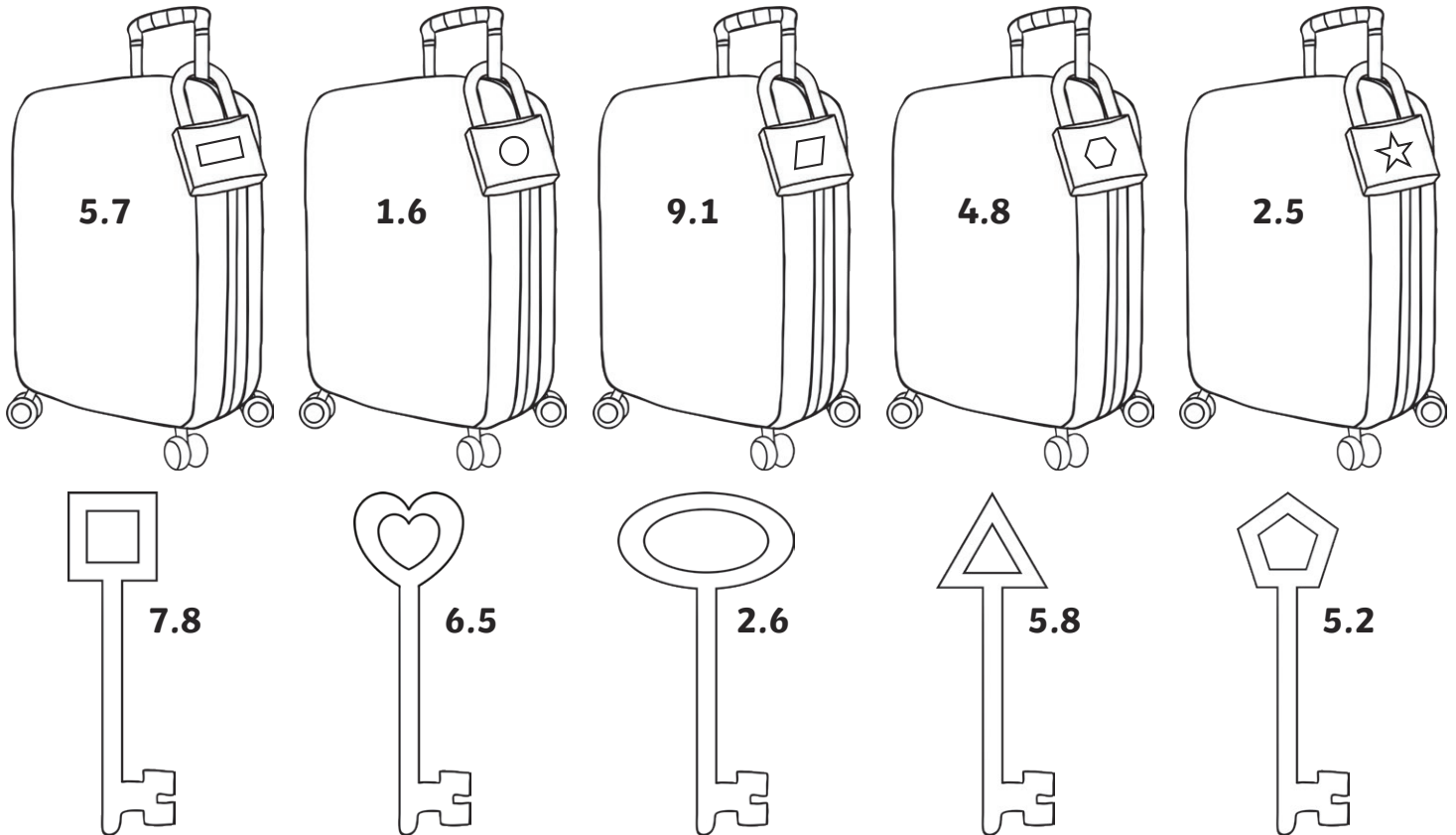


Decimal Digits

To determine the value of each digit in decimal numbers.



Use these suitcases and keys to solve the decimal place value puzzles.



1. Which suitcase and key both have a 5 in the tenths place? _____
2. Which suitcase has the lowest tenths digit? _____
3. Which key has the highest ones digit? _____
4. Which suitcase and key both have a 6 in the tenths place? _____
5. Which digit is in the tenths place on the rectangle suitcase? _____
6. Which digit is in the ones place on the hexagon suitcase? _____
7. The square key opens a suitcase with a matching digit in the tenths place. Which suitcase does it open? _____
8. The star suitcase is unlocked by a key with a matching digit in the tenths place. _____

Decimal Digits Answers

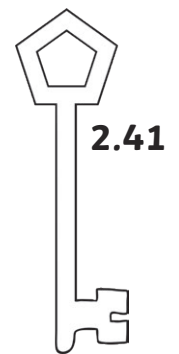
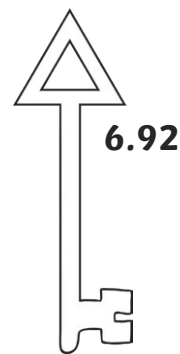
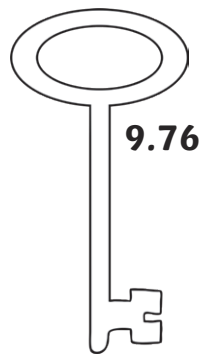
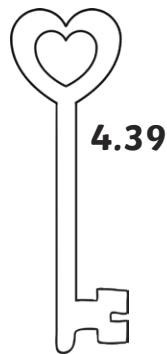
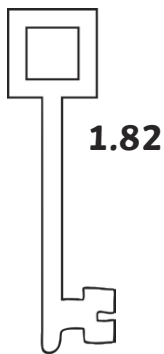
1. Which suitcase and key both have a 5 in the tenths place?
star suitcase and heart key (2.5 and 6.5)
2. Which suitcase has the lowest tenths digit?
rhombus suitcase (9.1)
3. Which key has the highest ones digit?
square key (7.8)
4. Which suitcase and key both have a 6 in the tenths place?
circle suitcase and oval key (1.6 and 2.6)
5. Which digit is in the tenths place on the rectangle suitcase?
7
6. Which digit is in the ones place on the hexagon suitcase?
4
7. The square key opens a suitcase with a matching digit in the tenths place.
Which suitcase does it open?
hexagon suitcase (4.8)
8. The star suitcase is unlocked by a key with a matching digit in the tenths place.
Which key unlocks it?
heart key (6.5)

Decimal Digits

To determine the value of each digit in decimal numbers.



Use these suitcases and keys to solve the decimal place value puzzles.



1. Which suitcase and key both have a 3 in the tenths place? _____
2. Which suitcase has the lowest hundredths digit? _____
3. Which key has the highest ones digit? _____
4. Which suitcase and key both have a 1 in the hundredths place? _____
5. Which suitcase and key have digits with a difference of 2 in the tenths place and the same ones digit? _____
6. Which suitcase and key have a digits with a sum of 9 in the hundredths place and 10 in the tenths place? _____
7. The pentagon key opens a suitcase with a matching digit in the ones place. Which suitcase does it open? _____
8. The rhombus suitcase is unlocked by a key with a matching digit in the hundredths place. Which key unlocks it? _____

Decimal Digits Answers

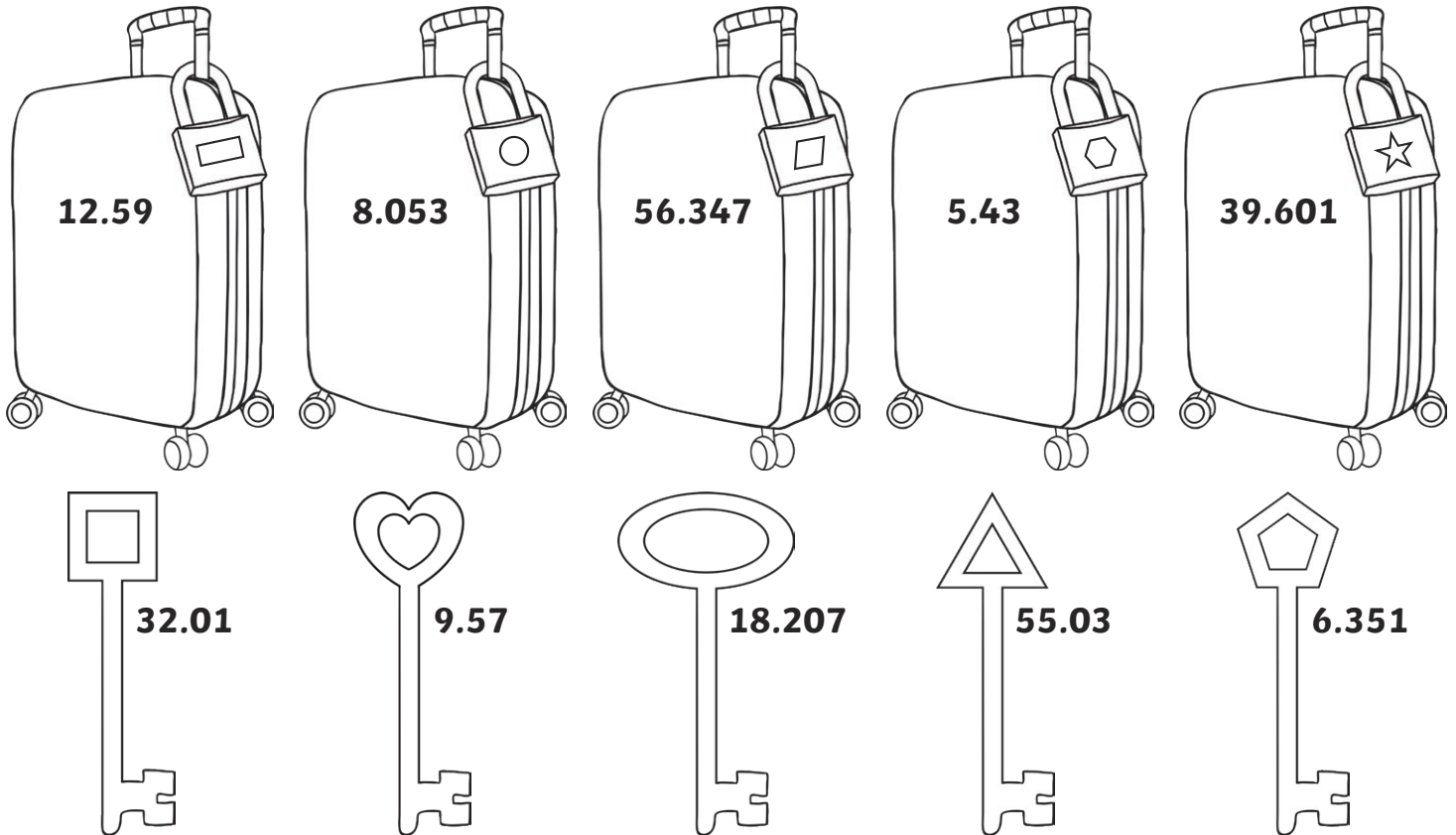
1. Which suitcase and key both have a 3 in the tenths place?
hexagon suitcase and heart key (9.35 and 4.39)
2. Which suitcase has the lowest hundredths digit?
rectangle suitcase (6.81)
3. Which key has the highest ones digit?
oval key (9.76)
4. Which suitcase and key both have a 1 in the hundredths place?
rectangle suitcase and pentagon key (6.81 and 2.41)
5. Which suitcase and key have digits with a difference of 2 in the tenths place?
star suitcase and pentagon key (2.69 and 2.41)
6. Which suitcase and key have digits with a sum of 9 in the hundredths place?
circle suitcase and square key (4.27 and 1.82)
7. The pentagon key opens a suitcase with a matching digit in the ones place.
Which suitcase does it open?
star suitcase (2.69)
8. The rhombus suitcase is unlocked by a key with a matching digit in the hundredths place.
Which key unlocks it?
oval key (9.76)

Decimal Digits

To determine the value of each digit in decimal numbers.



Use these suitcases and keys to solve the decimal place value puzzles.



1. Which suitcase and key both have a 5 in the tenths place? _____
2. Which suitcase has a hundredths digit that is 2 more than its thousandths digit? _____
3. Which key has a thousandths digit that is 1 less than its ones digit? _____
4. Which suitcase and key have tenths digits in which one is exactly half of the other? _____
5. Which suitcase and key have thousandths digits with a difference of 6? _____
6. Which suitcase and key have hundredths digits with a sum of 7? _____
7. The oval key opens a suitcase with a ones digit that is 3 times the key's tenths digit. Which suitcase does it open? _____
8. The hexagon suitcase is unlocked by a key with a with a ones digit that is half of the suitcase's tenths digit. Which key unlocks it? _____

Decimal Digits Answers

1. Which suitcase and key both have a 5 in the tenths place?
rectangle suitcase and heart key (12.59 and 9.57)
2. Which suitcase has a hundredths digit that is 2 more than its thousandths digit?
circle suitcase (8.053)
3. Which key has a thousandths digit that is 1 less than its ones digit?
oval key (18.207)
4. Which suitcase and key have tenths digits in which one is exactly half of the other?
hexagon suitcase and oval key (5.43 and 18.207)
or star suitcase and pentagon key (39.601 and 6.351)
5. Which suitcase and key have thousandths digits with a difference of 6?
rhombus suitcase and pentagon key (56.347 and 6.351)
or star suitcase and oval key (39.601 and 18.207)
6. Which suitcase and key have hundredths digits with a sum of 7?
star suitcase and heart key (39.601 and 9.57)
or rhombus suitcase and triangle key (56.347 and 55.03)
7. The oval key opens a suitcase with a ones digit that is 3 times the key's tenths digit.
Which suitcase does it open?
rhombus suitcase (56.347)
8. The hexagon suitcase is unlocked by a key with a with a ones digit that is half of the suitcase's tenths digit. Which key unlocks it?
square key (32.01)



1) a)

Ones	tenths	hundredths	thousandths
● ● ● ● ● ●	● ●		● ● ● ●

b) 6.204

2) a) 5.724 7 tenths or 0.7

b) 6.237 7 thousandths or 0.007

c) 7.501 7 ones or 7

d) 8.172 7 hundredths or 0.07

6.206 14.98 27.83 5.312 2.028

This suitcase has an 8 in the tenths place.

This suitcase has a 2 in the thousandths place.

This suitcase has the highest digit in the tenths place.

This suitcase has a 0 in the tenths place.

This suitcase has the lowest digit in the hundredths place.

1) Jamil is incorrect. 0.6 is a value of 6 tenths and the digit 6 on this suitcase has a value of 6 hundredths. Therefore he needs to subtract 0.06 to change the 6 into a zero.



2) a) Karen is incorrect. Both suitcases have 6 ones. The value of the 2 on the pink suitcase is 2 tenths and the green suitcase has 9 tenths, which is greater. Therefore the number on the green suitcase is greater than that of the pink number.

b) Karen is correct. No combination of digits would result in the pink suitcase having a larger number than the green suitcase.

1) Neither of the children are correct. The only pair that would make one of the digits a zero is the triangle key with the yellow suitcase.



$$11.758 - 1.0 = 10.758$$

2) Multiple possible answers, including...

56.437

52.316

58.144

3) Possible answers:

52.013, 52.114, 52.215

54.023, 54.124, 54.225

56.033, 56.134, 56.235

58.043, 58.144, 58.245



1) a) Draw counters in the correct parts of the place value grid to represent this number.

two tenths
six ones
four thousandths
zero hundredths

Ones	tenths	hundredths	thousandths

b) Write the number shown in digits. _____

2) Using a place value grid to help you, what is the value of the 7 in each of these numbers?

a) 5.724 _____

c) 7.501 _____

b) 6.237 _____

d) 8.172 _____

3) Match the correct suitcase to each statement.



This suitcase has an 8 in the tenths place.

This suitcase has a 2 in the thousandths place.

This suitcase has the highest digit in the tenths place.

This suitcase has a 0 in the tenths place.

This suitcase has the lowest digit in the hundredths place.



1) Jamil has this suitcase.



He says that to change the 6 to a zero, he needs to subtract 0.6. Do you agree? Explain your thinking.

2) Karen is comparing the numbers on the suitcases.



a)

The number on the pink suitcase is greater than that on the green suitcase because 203 is greater than 98.

b)

It is impossible to rearrange the digits on the pink suitcase to produce a number larger than the number on the green suitcase.



Karen

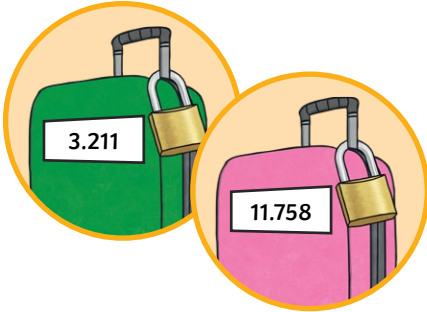
Do you agree with her statements? Explain your answer.

a)

b)



1) Year 5 are discussing the possibility of opening padlocks with different keys.
To unlock the suitcases, one of the digits in each number must change to zero.



I think that both suitcases can be unlocked using two of the keys.



None of the keys will unlock the suitcases.

Who is correct? Explain your answer fully.

2) Lemar is trying to work out the code on a padlock to open his suitcase.

- Here are the clues he has been given:
- The ones digit is double the hundredths digit.
 - The tens digit is 5.
 - The thousandths digit is three more than the tenths digit.



Give three possible answers.

3) Lemar is given a new clue.

The thousandths digit is less than 6.

Can you now find all possible answers?

- 1) a) Draw counters in the correct parts of the place value grid to represent this number.

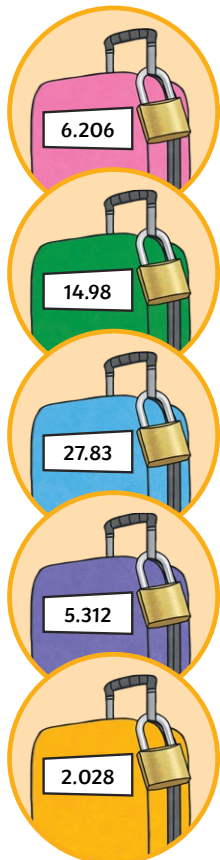


two tenths six ones		four thousandths zero hundredths	
Ones	tenths	hundredths	thousandths

- b) Write the number shown in digits.
- 2) Using a place value grid to help you, what is the value of the 7 in each of these numbers?

- a) 5.724 c) 7.501
- b) 6.237 d) 8.172

- 3) Match the correct suitcase to each statement.



- This suitcase has an 8 in the tenths place.
- This suitcase has a 2 in the thousandths place.
- This suitcase has the highest digit in the tenths place.
- This suitcase has a 0 in the tenths place.
- This suitcase has the lowest digit in the hundredths place.

- 1) a) Draw counters in the correct parts of the place value grid to represent this number.

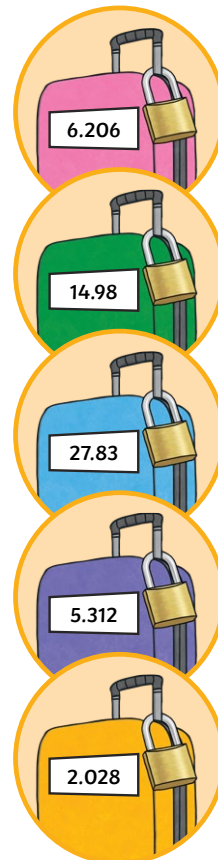


two tenths six ones		four thousandths zero hundredths	
Ones	tenths	hundredths	thousandths

- b) Write the number shown in digits.
- 2) Using a place value grid to help you, what is the value of the 7 in each of these numbers?

- a) 5.724 c) 7.501
- b) 6.237 d) 8.172

- 3) Match the correct suitcase to each statement.



- This suitcase has an 8 in the tenths place.
- This suitcase has a 2 in the thousandths place.
- This suitcase has the highest digit in the tenths place.
- This suitcase has a 0 in the tenths place.
- This suitcase has the lowest digit in the hundredths place.

1) Jamil has this suitcase.




He says that to change the 6 to a zero, he needs to subtract 0.6. Do you agree? Explain your thinking.

2) Karen is comparing the numbers on the suitcases.



Do you agree with her statements?
Explain your answer.

a)  Karen
The number on the pink suitcase is greater than that on the green suitcase because 203 is greater than 98.

b) It is impossible to rearrange the digits on the pink suitcase to produce a number larger than the number on the green suitcase.

1) Jamil has this suitcase.




He says that to change the 6 to a zero, he needs to subtract 0.6. Do you agree? Explain your thinking.

2) Karen is comparing the numbers on the suitcases.

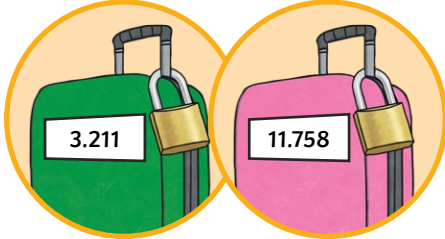
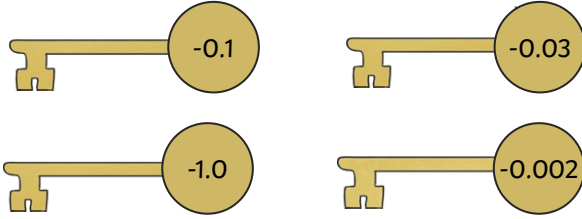


Do you agree with her statements?
Explain your answer.

a)  Karen
The number on the pink suitcase is greater than that on the green suitcase because 203 is greater than 98.

b) It is impossible to rearrange the digits on the pink suitcase to produce a number larger than the number on the green suitcase.

- 1) Year 5 are discussing the possibility of opening padlocks with different keys. To unlock the suitcases, one of the digits in each number must change to zero.



I think that both suitcases can be unlocked using two of the keys



None of the keys will unlock the suitcases.

Who is correct? Explain your answer fully.

- 2) Lemar is trying to work out the code on a padlock to open his suitcase.

Here are the clues he has been given:

- The ones digit is double the hundredths digit.
- The tens digit is 5.
- The thousandths digit is three more than the tenths digit.



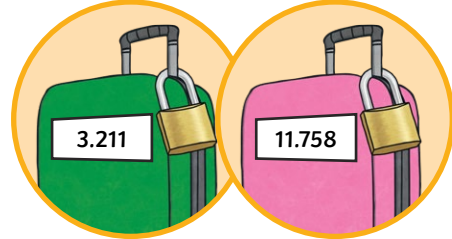
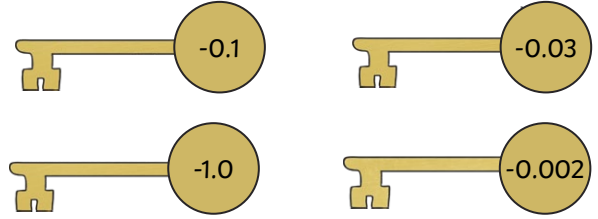
Give three possible answers.

- 3) Lemar is given a new clue.

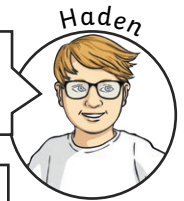
The thousandths digit is less than 6.

Can you now find all possible answers?

- 1) Year 5 are discussing the possibility of opening padlocks with different keys. To unlock the suitcases, one of the digits in each number must change to zero.



I think that both suitcases can be unlocked using two of the keys



None of the keys will unlock the suitcases.

Who is correct? Explain your answer fully.

- 2) Lemar is trying to work out the code on a padlock to open his suitcase.

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