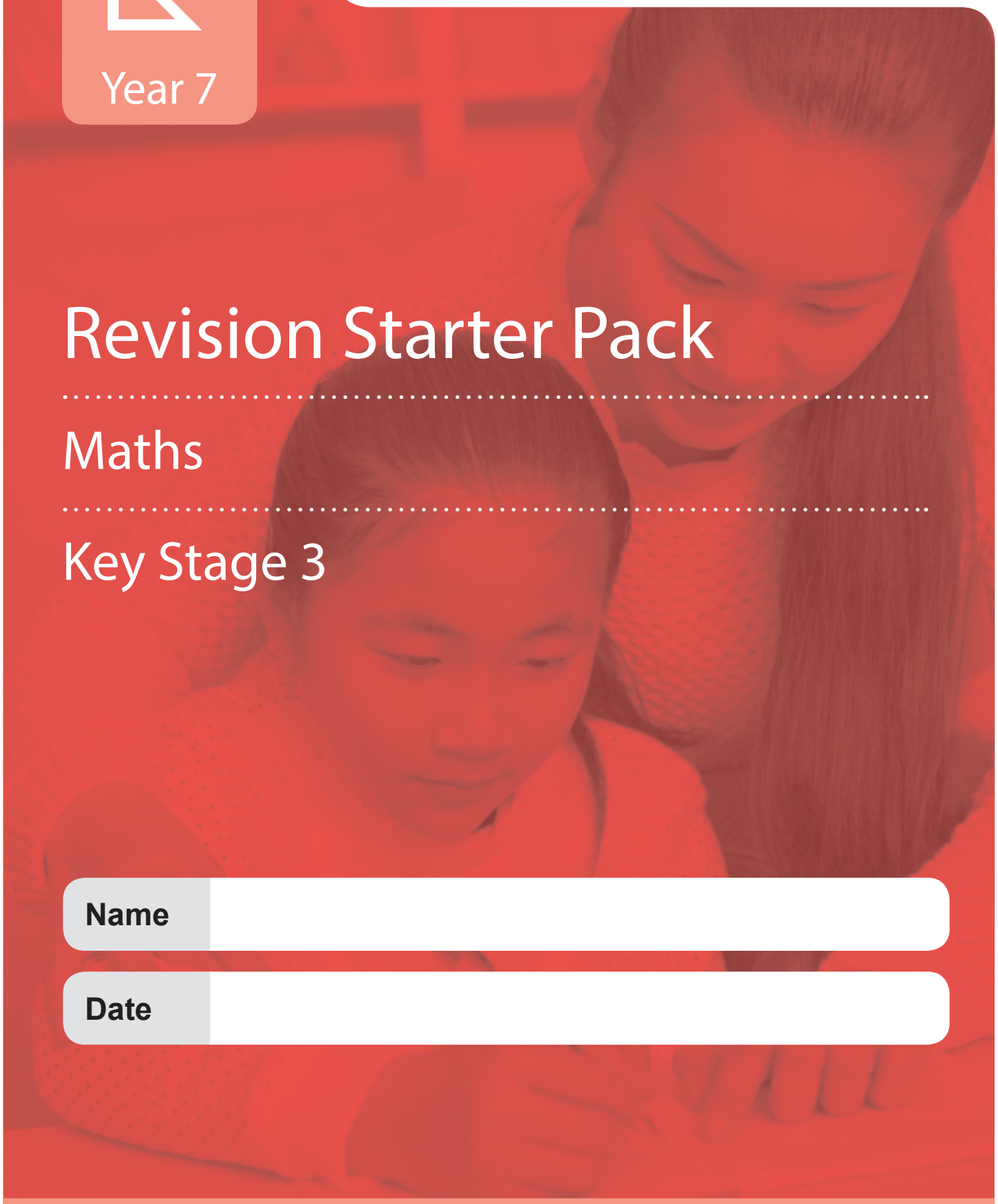
Year 7

Revision Starter Pack

Maths

Key Stage 3



Name

Date

Year Group Summary

Here is a brief overview of what pupils are learning in Maths in Year 7. All students are expected to achieve the 'Basic' objectives listed below, with many going on to achieve the 'Intermediate' ones and some managing the 'Advanced' ones. Have a look to see where your child is currently performing:

Maths

Basic

- Understand place value for decimals of any size.
- Basic decimal notation for money and measures.
- Order positive and negative numbers.
- Expressing themselves verbally using the mathematical language.
- Solve equations.
- Move between equivalent fractions and decimals.
- Analyse 2D and 3D shapes.
- Change easily between different measurements.
- Lists, tables, charts and simple data diagrams.

Intermediate

- Know written, formal forms of multiplication.
- Use four operations and efficient calculation strategies.
- Interpret line graphs and pie charts.
- Use approximations to estimate answers.
- Use simple formulae.
- In algebra, identify variables.
- Reflections.
- Accuracy in measurement.
- Areas of shapes.
- Collection of discrete data.
- Frequency, averages and ranges.

Advanced

- Four rules of whole numbers, negative numbers and decimals.
- Ratio and proportion.
- Fractions and percentages.
- Simple theorems.
- Use notation, including brackets.
- Coordinates in four quadrants.
- Constructions, angles, symmetries.
- Metric conversions.
- Areas of rectangles.
- Averages and range.
- Interpretation of different graph forms including pie charts.
- Simple probability scales and outcomes.

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Revision Tips

Revision can sometimes feel like hard work, but it doesn't have to be. Here are some top tips on how to get started.

Maths problems are all around us. For example, fractions can be talked about when cutting up cakes or pizzas. Or, to help with addition, ask your children to help you count up how much your weekly food shop will come to. English can be practised by reading newspapers, writing letters and diaries and discussing characters in films or books with your children.

So, use everyday situations to keep your child stimulated in their learning. This will also help them understand the value of their learning.

When it comes to traditional revision techniques, here are some top tips and tricks on how to get the best out of your child ahead of their exams.

It is always good to find out how your child learns best. This will be tested in schools as children get older. Many people are visual learners, often being able to recall a picture of what they see on a page. If your child is one of these people, decorating and sticking up revision notes in ways that help key points stick in the mind can be really helpful, as can spider diagrams. Auditory learners tend to remember sounds better so remembering key facts by mentally 'pinning' them to a particular tune or piece of music can help. Kinaesthetic learners find that movement can help with remembering things, for example creating jigsaws out of key words and phrases and then recalling the piecing together of the jigsaw during the exam.

Revision is the perfect opportunity to bond with your child, so the most important thing is that you are both enjoying it and having fun!

A good tip, especially with younger children, is to keep revision fun. This will mean that they are relaxed and enjoying themselves and won't be affected by the pressure of 'test stress'. There are plenty of online resources and fun activities available for revision purposes that are set out as puzzles and games that younger children will love completing.

All children, no matter what age they are, learn better when they are comfortable. Try and ensure that the room is quiet and calm. Revision is the perfect opportunity for you to bond with your child, so the most important thing is that you are both enjoying it and having fun!

Here are some exclusive worksheets to help you get started:

Maths

- Division Word Problems
- Simplify and then Solve Equations
- Solve Worded Number Problems
- Square Roots of Decimals
- Translate into Algebra

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Maths Worksheets

Key Stage 3

- Division Word Problems
- Simplify and then Solve Equations
- Solve Worded Number Problems
- Square Roots of Decimals
- Translate into Algebra

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Maths Worksheet

Division Word Problems

In this worksheet, students must round off to give sensible answers to wordy division problems.

Key Information

Topic	Division
Questions	10
Key Stage	KS3
Year	7
Curriculum Topic	Number
Curriculum Subtopic	Round Numbers

Introduction

Sometimes when we divide, we get answers which are too accurate and therefore don't make sense.

We must round the answer up or down to make sense of the question.

Example
How many coaches carrying 20 people will be needed to take 575 people to a football match?

Answer
$575 \div 20 = 28.75$

It is IMPOSSIBLE to have 28.75 coaches....
so we need to THINK!

28 coaches will not be enough.

So we need to round up to 29 coaches.

Maths Worksheet

Division Word Problems

Key Stage 3 • Year 7

Questions

Q1

Solve the problem and round to make a sensible answer.

How many chocolate bars at 8p can I buy for £1?

Answer

Q2

Solve the problem and round to make a sensible answer.

How many chocolate bars at 23p can I buy for £1?

Answer

Q3

Solve the problem and round to make a sensible answer.

How many coaches carrying 40 people will be needed to take 430 people to a football match?

Answer

Q4

Solve the problem and round to make a sensible answer.

How many chocolate bars at 13p can I buy for £1?

Answer

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Questions

Q5

Solve the problem and round to make a sensible answer.

How many chocolate bars at 12p can I buy for £2?

Answer

Q6

Solve the problem and round to make a sensible answer.

How many chocolate bars at 5p can I buy for £3?

Answer

Q7

Solve the problem and round to make a sensible answer.

How many coaches carrying 40 people will be needed to take 652 people to a football match?

Answer

Q8

Solve the problem and round to make a sensible answer.

How many whole weeks are there in 286 days?

Answer

Questions

Q9

Solve the problem and round to make a sensible answer.

How many flower boxes of 17 plants can be filled with 674 plants?

Answer

Q10

Solve the problem and round to make a sensible answer.

A volunteer has to deliver 447 picnic boxes. Her car will only hold 26 boxes. How many journeys must she make to deliver them all?

Answer

Answers

A1

Correct Answer: 12

TICK

Explanation
100 ÷ 8 = 12.5, but we can't buy 0.5 of a bar of chocolate, so the answer is 12 whole bars.

A2

Correct Answer: 4

TICK

Explanation
100 ÷ 23 = 4.34783.... it's impossible to buy 0.34783.... of a bar of chocolate, so the answer is 4 whole bars.

A3

Correct Answer: 11

TICK

Explanation
430 ÷ 40 = 10.75. This means that we have 10 full coaches, plus one more for the remaining people.

A4

Correct Answer: 7

TICK

Explanation
100 ÷ 13 = 7.692... so we can only buy 7 WHOLE bars..

A5

Correct Answer: 16

TICK

Explanation
200 ÷ 12 = 16.666... so we can buy 16 WHOLE bars.

A6

Correct Answer: 60

TICK

Explanation
300 ÷ 5 = 60, so we can buy exactly 60 bars.

A7

Correct Answer: 17

TICK

Explanation
652 ÷ 40 = 16.3. This means we have 16 full coaches plus one more for the remaining people.

A8

Correct Answer: 40

TICK

Explanation
286 ÷ 7 = 40.8571... which means there are 40 WHOLE weeks in 286 days.

Answers

A9

Correct Answer: 39

TICK

Explanation
674 ÷ 17 = 39.647... which means that only 39 boxes can be completely filled.

A10

Correct Answer: 18

TICK

Explanation
447 ÷ 26 = 17.1923... which means that she can make 17 journeys with her car full, but she needs to make one more journey to take the left over boxes.

TOTAL

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Maths Worksheet

Simplify and then Solve Equations

In this worksheet, students must simplify like terms before solving simple one-stage equations.

Key Information

Topic	Algebra: Variables and Equations
Questions	10
Key Stage	KS3
Year	7
Curriculum Topic	Algebra
Curriculum Subtopic	Understand Expressions, Equations, Inequalities, Terms and Factors

Introduction

When we solve algebraic equations, our aim is to end up with one letter on one side of the equals sign and one number on the other. This is the solution.

We do this by simplifying like terms if we can and then using inverse operations to undo things that get in the way, but remember that we must do the same thing to both sides.

Example

$7b - 2b = 20$

Answer

Simplify the left hand side by combining like terms.

$5b = 20$

Divide both sides by 5.

$5b \div 5 = 20 \div 5$

Simplify.

$b = 4$

Maths Worksheet

Simplify and then Solve Equations

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Questions

Q1 Solve for a: $7a - a = 12$

- ○ $a = 19$
- ○ $a = 12$
- ○ $a = 2$

Q2 Solve for a: $4a + a = 15$

- ○ $a = -11$
- ○ $a = 3$
- ○ $a = 19$

Q3 Solve for a: $5a + 2a = 21$

- ○ $a = 14$
- ○ $a = 3$
- ○ $a = 28$

Q4 Solve for a: $6a + 5a = 22$

- ○ $a = 33$
- ○ $a = 11$
- ○ $a = 2$

Q5 Solve for a: $5a - 4a = 21$

- ○ $a = -12$
- ○ $a = 21$
- ○ $a = 12$

Q6 Solve for a: $10a - 2a = 24$

- ○ $a = 3$
- ○ $a = 6$
- ○ $a = -6$

Questions

Q7

Solve for a: $a - 2a = 18$

- $a = -18$
- $a = 6$
- $a = 18$

Q8

Solve for a: $3a - 6a = 18$

- $a = 15$
- $a = 6$
- $a = -6$

Q9

Solve for a: $2a - a = -13$

- $a = 11$
- $a = -13$
- $a = 12$

Q10

Solve for a: $-10a + 25a = -30$

- $a = 15$
- $a = -15$
- $a = -2$

Answers

A1	a = 2	TICK ☐	A6	a = 3	TICK ☐
A2	a = 3	TICK ☐	A7	a = -18	TICK ☐
A3	a = 3	☐	A8	a = -6	☐
A4	a = 2	☐	A9	a = -13	☐
A5	a = 21	☐	A10	a = -2	☐

TOTAL

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Maths Worksheet

Solve Worded Number Problems

In this worksheet, students must solve worded number problems with or without the aid of a calculator.

Key Information

Topic	Four Operations
Questions	10
Key Stage	KS3
Year	7
Curriculum Topic	Number
Curriculum Subtopic	Four Operations

Introduction

In this worksheet, you must answer worded number problems.

Example

Which fraction is larger? $A = \frac{3}{9}$ or $B = \frac{6}{7}$

Answer

$3 \div 9 = 0.33333333.....$

$6 \div 7 = 0.8571428....., $ which is larger?

Answer is B

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Questions

Q1

Which fraction is larger?
Use your calculator to help you.

$A = \frac{3}{4}$ or $B = \frac{5}{9}$

- A
- B

Q2

Find two whole numbers whose sum is 8 and whose product is 12.

- 2
- 4
- 6

Q3

Two consecutive whole numbers add up to 41.
What are the numbers?

- 20 and 21
- 30 and 11
- 19 and 20

Q4

You are told that three consecutive whole numbers add up to 84.
If this is possible, find the numbers.

- 26 and 27 and 28
- 27 and 28 and 29
- 28 and 29 and 30

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Questions

Q5

The sum of two whole numbers is 22 and their difference is 14.
Find the two numbers.

- 19 and 6
- 16 and 6
- 18 and 4

Q6

You are told that the sum of another two whole numbers is 20 and their difference is 15. Is this possible?

- Yes
- No

Q7

The mean of three numbers is 12.
Two of three numbers are 9 and 14.
What is the third number?

- 14
- 13
- 17

Q8

Which fraction is larger?
Use your calculator to help you.

$A = \frac{3}{9}$ or $B = \frac{6}{7}$

- A
- B

Questions

Q9

Find two whole numbers whose sum is 9 and whose product is 8.

- 1
- 8
- 7

Q10

Which fraction is smaller?

$A = \frac{1}{6}$ or $B = \frac{2}{9}$

- A
- B

Answers

A1

Correct Answer: A

TICK ☐

Explanation
3 ÷ 4 = 0.75
5 ÷ 9 = 0.555
So A is larger

A2

Answer 1: 2 — TICK ☐

Answer 2: 6 — TICK ☐

Explanation
2 + 6 = 8
2 × 6 = 12

A3

Correct Answer: 20 and 21

TICK ☐

Explanation
20 + 21 = 41

A4

Correct Answer: 27 and 28 and 29

TICK ☐

Explanation
27 + 28 + 29 = 84

A5

Correct Answer: 18 and 4

TICK ☐

Explanation
18 + 4 = 22
18 - 4 = 14

A6

Correct Answer: No

TICK ☐

Explanation
The only solution is 17½ and 2½, which are not whole numbers

A7

Correct Answer: 13

TICK ☐

Explanation
Total is 3 x 12 = 36

A8

Correct Answer: B

TICK ☐

Explanation
3 ÷ 9 = 0.333
6 ÷ 7 = 0.857
So B is larger

Answers

A9

Answer 1: 1 — TICK

Answer 2: 8 — TICK

Explanation
1 + 8 = 9
1 × 8 = 8

A10

Correct Answer: A — TICK

Explanation
1 ÷ 6 = 0.166
2 ÷ 9 = 0.222
So A is smaller

TOTAL

Year 7

Maths Worksheet

Square Roots of Decimals

In this worksheet, students must state the square roots of decimal numbers.

Key Information

Topic	Numbers: Integer Powers and Real Roots
Questions	10
Key Stage	KS3
Year	7
Curriculum Topic	Number
Curriculum Subtopic	Integer Powers and Real Roots

Introduction

The words squared and square Root are opposites.
You should know that 0.3 squared = 0.09 because
0.3 x 0.3 = 0.09.

We write this as $0.3^2 = 0.09$.
And so the square root of 0.09 = 0.3.
We write this as $\sqrt{0.09} = 0.3$.

Example
Work out $\sqrt{0.49}$ and $\sqrt{0.0001}$.

Answer
$\sqrt{0.49} = 0.7$ because $0.7^2 = 0.49$.
$\sqrt{0.0001} = 0.01$ because $0.01^2 = 0.01 \times 0.01 = 0.0001$.

Square Roots of Decimals

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Questions

Q1 Work out: $\sqrt{0.25}$

Answer

Q2 Work out: $\sqrt{0.09}$

Answer

Q3 Work out: $\sqrt{0.49}$

Answer

Q4 Work out: $\sqrt{0.81}$

Answer

Q5 Work out: $\sqrt{0.01}$

Answer

Questions

Q6

Work out: $\sqrt{0.16}$

Answer

Q7

Work out: $\sqrt{0.36}$

Answer

Q8

Work out: $\sqrt{0.64}$

Answer

Q9

Work out: $\sqrt{0.0004}$

Answer

Q10

Work out: $\sqrt{0.0009}$

Answer

Answers

A1 0.5 TICK

Explanation
$\sqrt{0.25} = 0.5$ because 0.5^2 or
$0.5 \times 0.5 = 0.25$

A2 0.3 TICK

Explanation
$\sqrt{0.09} = 0.3$ because 0.3^2 or
$0.3 \times 0.3 = 0.09$

A3 0.7 TICK

Explanation
$\sqrt{0.49} = 0.7$ because 0.7^2 or
$0.7 \times 0.7 = 0.49$

A4 0.9 TICK

Explanation
$\sqrt{0.81} = 0.9$ because 0.9^2 or
$0.9 \times 0.9 = 0.81$

A5 0.1 TICK

Explanation
$\sqrt{0.01} = 0.1$ because 0.1^2 or
$0.1 \times 0.1 = 0.01$

A6 0.4 TICK

Explanation
$\sqrt{0.16} = 0.4$ because 0.4^2 or
$0.4 \times 0.4 = 0.16$

A7 0.6 TICK

Explanation
$\sqrt{0.36} = 0.6$ because 0.6^2 or
$0.6 \times 0.6 = 0.36$

A8 0.8 TICK

Explanation
$\sqrt{0.64} = 0.8$ because 0.8^2 or
$0.8 \times 0.8 = 0.64$

Answers

A9

0.02

TICK

Explanation
$\sqrt{0.0004} = 0.02$ because 0.02^2
or $0.02 \times 0.02 = 0.0004$

A10

0.03

TICK

Explanation
$\sqrt{0.0009} = 0.03$ because 0.03^2
or $0.03 \times 0.03 = 0.0009$

TOTAL

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Maths Worksheet

Translate into Algebra

In this worksheet, students must choose the expression which matches the given word problem.

Key Information

Topic	Algebra: Problem Solving
Questions	10
Key Stage	KS3
Year	7
Curriculum Topic	Reason Mathematically
Curriculum Subtopic	Extend Understanding, Connections and Relationships

Introduction

Look at the following examples to see how algebraic expressions can be used to represent word problems.

Expression	Word Problem
a + 4	4 more than a
a - 4	4 less than a
4 - a	a less than 4
4a	4 times a
a/4	a ÷ 4 or ¼ of a
3a + 4	4 more than 3 times a
a/2 - 6	6 less than half of a

Questions

Q1

Jack has m marbles and his sister gives him 4 more.
Choose the expression which shows how many he has now.

- ◯ m
- ◯ 4m
- ◯ m + 4
- ◯ m - 4

Q2

Bill has d songs on his music player.
He deletes 15 of them. How many does he have now?

- ◯ d
- ◯ d - 15
- ◯ 15 - d
- ◯ d + 15

Q3

Katie has s sweets. She gives half of them to her brother.
How many does she have left?

- ◯ s - 2
- ◯ 2s
- ◯ s - ½
- ◯ s/2

Q4

Jill has m marbles and her sister gives her 14 more.
Choose the expression which shows how many she has now.

- ◯ 14m
- ◯ m -14
- ◯ 14 - m
- ◯ m + 14

Questions

Q5

Jill has m marbles and gives her sister 14 of them.
Choose the expression which shows how many she has now.

- ◯ m
- ◯ 14m
- ◯ m + 14
- ◯ m - 14

Q6

Bill has d songs on his music player.
He buys 15 more songs. How many does he have now?

- ◯ d
- ◯ 15d
- ◯ d + 15
- ◯ d - 15

Q7

Dan has 15 songs on his music player.
He deletes d of them. How many does he have now?

- ◯ d
- ◯ d - 15
- ◯ 15 - d
- ◯ d + 15

Q8

Dan has d songs on his music player. Anne has fifteen times as many.
How many does Anne have?

- ◯ 15d
- ◯ d - 15
- ◯ 15 - d
- ◯ d + 15

Questions

Q9

Tariq has b books on his shelf. He lends 5 books to his sister.
How many are left on his shelf?

- 5b
- 5 - b
- b - 5
- b + 5

Q10

Tariq has 25 books on his shelf. He lends b books to his sister.
How many are left on his shelf?

- 25b
- 25 - b
- b - 25
- b + 25

Answers

A1 m + 4 — TICK

Explanation
m marbles + 4 from his sister

A2 d - 15 — TICK

Explanation
d songs - 15 deleted songs

A3 s/2 — TICK

A4 m + 14 — TICK

Explanation
m marbles + 14 her sister gave her

A5 m -14 — TICK

Explanation
m marbles – 14 Jill gave to her sister

A6 d + 15 — TICK

Explanation
d songs + 15 new songs

A7 15 - d — TICK

Explanation
15 songs - d deleted songs

A8 15d — TICK

Explanation
15d is the same as 15 x d songs that Dan has

A9 b - 5 — TICK

Explanation
b books - 5 books Tariq lent to his sister

A10 25 - b — TICK

Explanation
25 books - b books Tariq lent to his sister

TOTAL

Summary

Help your child prepare for exams. See your child progress, gain confidence and measure results. Brilliant!

Don't worry, we're here to help you along the way.

- EdPlace is an affordable online education partner designed to help parents support their child's education
- We offer 1000s of interactive topics in English, Maths and Science across the National Curriculum for ages 5-16
- All our content is created by qualified teachers
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