Home Learning Pack

Year 6

Week 7
08/06/2020

Classroom secrets ★ KIDS

Monday – Find a Rule – Two Step

1. Complete the missing input and output to the two-step function machines below.

A.

Input:	Function:		Output:
15	x 4	+ 10.5	

B.

Input:	Function:		Output:
	+ 15	÷ 2	22
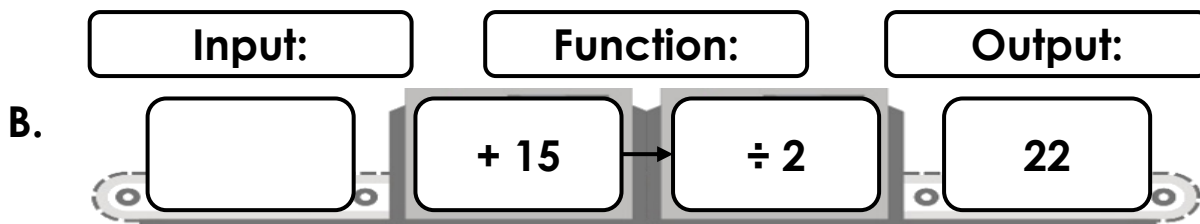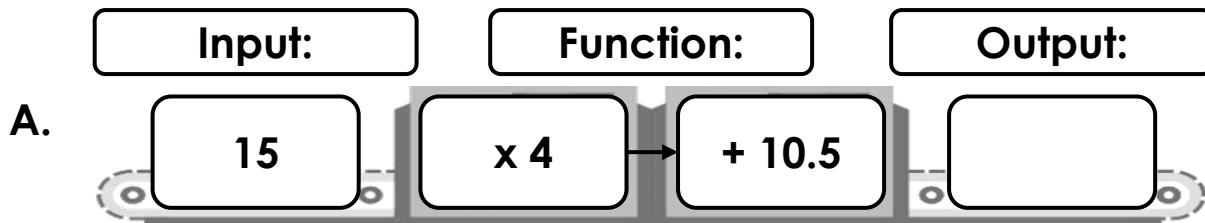
2. Draw lines to match the inputs and outputs to the correct two-step function below.

Inputs:	Function:	Outputs:
17.5	x 2 + 10	32
11	÷ 2 − 9	15
8	− 10 x 2	-5
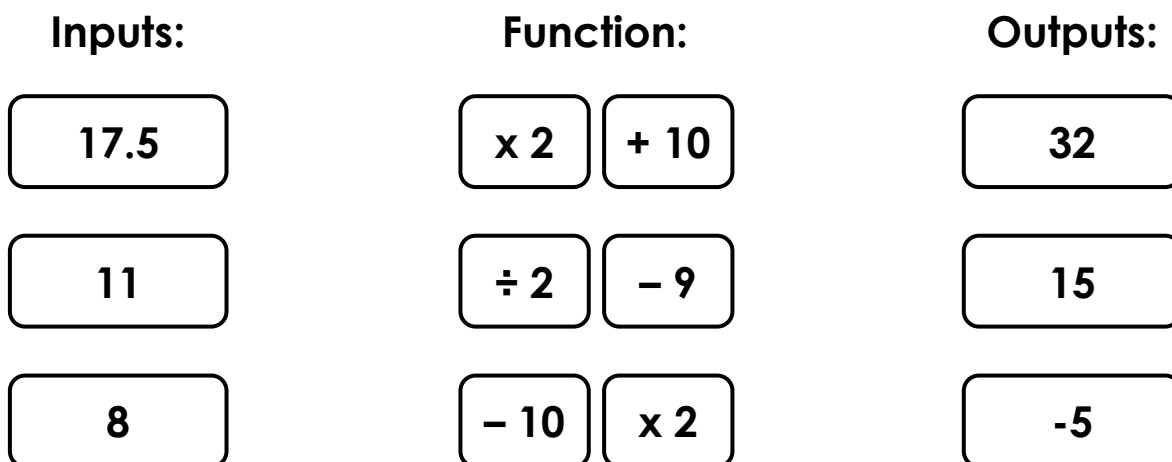
3. The output of the two-step function machine below is between 0 and 50.

Input:	Function:		Output:
-1	x 9	?	?
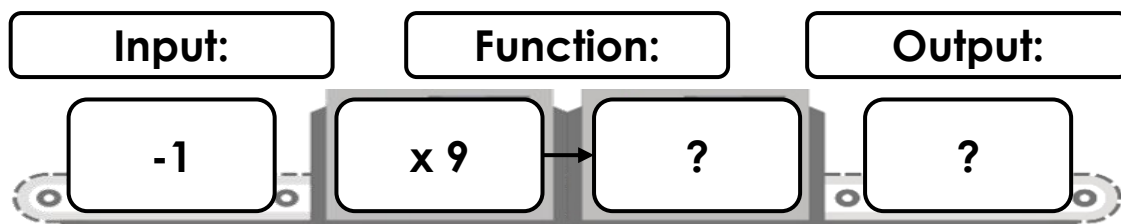
Complete the missing function in order to work out what the output could be.
Find 3 possibilities.

Monday – Using Apostrophes

1. Underline the words in the sentences below that use an apostrophe for contraction. In each box, write out the full forms of each contracted word.

A. "You shan't have them!" Adam said playfully as he pulled his cats' toys away.

B. The audience's refreshments were running out at the theatre. The boss shouted to his workers, "I won't be able to get any more, so just sell what we've got!"

C. Alice and James's homework wasn't quite finished, but they didn't have any more time to get it done.

2. Nathan has written the sentence below.

> Sarah and Becky's shop wasn't open yet but the girls' excitement was building as the opening day came closer.

Nathan says,

> I haven't used an apostrophe for singular possession and I have only used an apostrophe for contraction once.

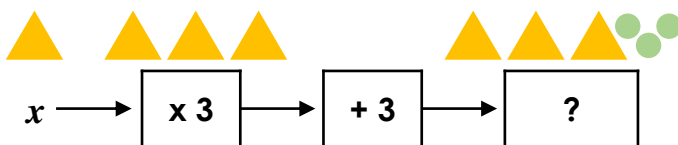Is he correct? Explain your answer.

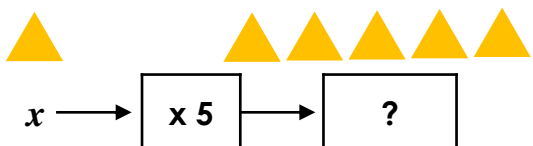3. Georgia has written the sentences below but she has made some mistakes with apostrophes.

> Lucas and Haleys party was coming closer but theyd not even started their preparations yet. The guests invitation's would'nt get there in time and the food hadn't been ordered. Lucas exclaimed nervously, "We'll never be ready in time!"
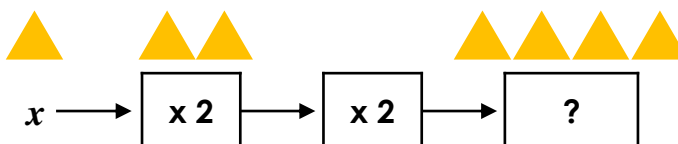
Explain and correct Georgia's mistakes below.

Tuesday – Forming Expressions

1. Draw a line to match each function machine to the correct expression.

A. $x \longrightarrow$ | x 3 | $\longrightarrow$ | + 3 | $\longrightarrow$ | ? |

| 5x |

B. $x \longrightarrow$ | x 5 | $\longrightarrow$ | ? |

| 4x |

C. $x \longrightarrow$ | x 2 | $\longrightarrow$ | x 2 | $\longrightarrow$ | ? |

| 3x + 3 |

2. These are the outputs for the given function machines. Complete the functions.

A. $y \longrightarrow$ | ? | $\longrightarrow$ | ? | $\longrightarrow$ | 3y – 7 |

B. $y \longrightarrow$ | ? | $\longrightarrow$ | y ÷ 3 |

C. $y \longrightarrow$ | ? | $\longrightarrow$ | ? | $\longrightarrow$ | 2y + 6 |

3. Use the digit cards to create functions for the given input and write the expression.

$f \longrightarrow$ | | $\longrightarrow$ | |

x   ÷   –   +   7

3   4   1   5

This worksheet is part of our **Year 6** Home Learning Pack for **Week 7**.
Visit **kids.classroomsecrets.co.uk** for online games to support learning.

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Tuesday – Direct and Indirect Speech

1. Read the paragraphs below. Underline the direct speech sentences in green. Underline the indirect speech sentences in red.

As they approached the abandoned house, Jake looked round at his friends. Cautiously, he asked them if they were scared. Laughing loudly, Zoe responded, "No, I've been looking forward to this for weeks!"

All of a sudden, they heard a loud bang from behind the door. They froze and stared at each other in horror. Mike yelled, "Run!" at the top of his lungs. As they scrambled back down the path, Zoe reluctantly admitted that she was absolutely terrified.

2. Circle to show where inverted commas are missing from the paragraph below.

Dipping her toes into the warm, glittering ocean, Arya smiled to herself. She turned and mischievously asked her brother if he was up for a challenge. What have you got in mind? he questioned curiously. With a wide grin on her face, she pointed to the buoys bobbing in the water and announced, I'll race you there and back!

3. Which sentence in the paragraph below is incorrect? Explain why and re-write the sentence correctly.

Greg had worked so hard to win the Science Fair competition. When Professor Dorwin told him, "What an incredible scientist he had become." Greg couldn't stop himself from beaming with pride. He thanked the professor for all of the help and support he had given him over the years. Professor Dorwin reminded him, "You could never have achieved this without your hard work and determination, Greg."

Wednesday – Substitution

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1. Complete the values of the expressions by substituting the following.

$$p = 3.25 \qquad q = 4 \qquad r = \frac{1}{2}$$

A. $3p + 4r =$ ☐

C. $q \div r =$ ☐

B. $2q - p =$ ☐

D. $pq - 2.5r =$ ☐

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2. Circle any expression that gives an answer < 5.

$$h = 6 \qquad j = 7.5 \qquad k = \frac{1}{4}$$

A. $2h - 8 =$ ☐

B. $2j + 7k =$ ☐

C. $3h - 2k =$ ☐

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3. For each of the statements below say whether you agree or disagree. Explain your reasoning.

A. The value 1.25 solves the equation $22 - 2x = 18$

B. The value 2.5 solves the equation $13 + 3y = 20\frac{1}{2}$

Wednesday – Using Commas in a List

1. The commas have been used correctly in each sentence below. Write true (T) or false (F) next to each sentence.

A. David bought a ham sandwich, a packet of salt and vinegar crisps, two chocolate bars and a pot of yoghurt for lunch. ☐

B. It was clear that Henry didn't like him because he was extremely rude, obnoxious and completely inconsiderate of other people. ☐

C. The stationery shop had a new delivery that consisted of packs of pens, sealed notepads, small boxes, of paper clips and coloured pencils. ☐

2. Underline the word(s) in the sentences below which require a comma after them.

A. The shopping centre has recently opened a new supermarket two clothing stores a stationery shop and three new Italian restaurants.

B. Toni didn't like living in cities because she thought they were far too crowded too expensive to be able to live comfortably too dirty and that she would be at a higher risk of being burgled.

C. The bakery in town had a fine selection of tasty treats including creamy scones savoury pasties moist cakes and home-made pies.

3. Tommy has written a birthday wish list but wants to convert it into a full sentence.

He says,

I will need to use 4 commas when converting my list into a full sentence.

My Birthday Wish List

a computer game
new trainers
two packs of football cards
a set of dumbbells

Is Tommy correct? Explain how you know.

Thursday – Forming Equations

1. Draw a line to match each word problem to the correct algebraic equation.

A. Haz thinks of a number. He divides it by 2. The answer is 20.5.

$9n - 2 = 20.5$

B. Jassy thinks of a number. She adds 20.5. Her answer is 22.5.

$n ÷ 2 = 20.5$

C. Po thinks of a number. He multiplies it by 9 and subtracts 2. His answer is 20.5.

$n + 20.5 = 22.5$

2. Write algebraic equations to match the information below.

A. Ben is making biscuits (b). He shares them between 6 people. They each get 5 biscuits.

B. Paulo has a bag of sweets (s). He is given 6 more. He has 15 sweets in total.

C. Lenny thinks of a number (n). He multiplies it by $\frac{1}{2}$ and then subtracts 4. His answer is 6.

3. Ellie thinks that her story matches the equation below.

$$m ÷ 4 - 1 = 5$$

I have some marbles. I share them between 4 friends. Then, I give each friend one more marble. My friends end up with 5 marbles each.

Is Ellie correct? Explain why.

In the boxes, write the letter of each section to correctly order the text. Alternatively, cut out the boxes and correctly re-order the text.

A. Gretel, aged 8, said that they were so shocked and thought that they might have been dreaming. But they were so hungry that they started eating the biscuit walls and the chocolate windows.

I. The children were then rescued by Mr Score, a friend of the family. They were taken back to their father who was delighted to see them. It is believed that their evil stepmother is no longer living with them.

B. Yesterday, just before sunset, Mr Cutt, the local Woodcutter, was reunited with his two children, Hansel and Gretel.

J. The local police have been investigating this strange but serious kidnap. Local children (and parents) have eaten the rest of the cottage made of sweets.

C. It all started last week when the children's mean stepmother is said to have ordered the poor children to leave their family home. Mr Cutt said that the family had been struggling to afford food for everybody. A neighbour said, "Mr Cutt loves those children and would never normally do anything like that but he was forced to take them deep into the woods and leave them there."

K.

D. Yesterday, two local children were reunited with their father following one of the strangest kidnaps in history.

E. The children waited in the forest all night, praying that somebody would rescue them. Nobody came, so in the morning, they set off to try to find their own way home. The children think that they wandered around the forest for days before coming across a strange cottage made completely out of sweets!

L. It is thought that the children were then disturbed by an old lady who invited them into her cottage. However, the old lady turned out to be an evil old lady who kidnapped them and planned to eat them!

M. Reported by Philippa Wickens

F. A Sweet Escape!

G. Tired of waiting for them to fatten up, the old lady apparently turned on the oven ready to roast the children. Luckily, Hansel had a plan. As the wicked lady let Hansel out of his cage, he pushed her into the oven and padlocked the door. He then released his terrified sister and they escaped.

N. She kept them locked in cages for days, trying to fatten them up. Luckily, she had very bad eyesight so didn't realise that the children were not eating the food that she was giving them.

H. Mr Cutt was so happy to be reunited with his children.

O. We believe that Hansel Cutt, aged 11, left a trail of breadcrumbs from their home so that they could find their way back. But, the hungry birds ate all of the breadcrumbs and the children were lost in the dark, scary forest.

Additional Resources – Reading Comprehension
A Week on Galapagos

Read the text on pages 11, 12 and 13, then answer the questions below.

1. Write the features that tell you this text is a diary.

2. Look at the first paragraph. Find and copy the word which is a synonym of 'boat'.

3. In what three ways was Jenny similar to Darwin?

4. Look at the diary entry for Tuesday 26th March. Find and copy the word which is similar in meaning to 'fearless'.

5. *'I'm glad I've shared some of their secrets.'*
What were the secrets that Jenny was referring to?

6. Why does Jenny use the word *'intricate'* to describe the natural world?

7. Why did Jenny sketch the finches?

8. *'Nature had dictated the fate of this species.'* What does this phrase mean?

9. Look at the diary entry for Friday 28th March. The text says the palaeontologists are like detectives. Find and copy the words which show this.

10. Read the last diary entry. How did Jenny feel about the journey? Use evidence from the text to support your answer.

11. Write two facts for each animal mentioned in the text.

<u>Monday 25th March</u>

Jenny Shaw, naturalist, reporting for duty! I'm writing this on a small boat heading to the archipelago of the Galapagos Islands, due west of South America. My interest in the work of Charles Darwin led me to study these islands. Darwin, who was a renowned scientist, also sailed to these islands in 1835 and was puzzled by the unique wildlife he found there. Years earlier, after a failed attempt at a career in medicine, he was unexpectedly offered the job of a 'naturalist' on board the 'Beagle', a small sailing vessel set for a voyage around the world. During the long and arduous journey, he spent five weeks on the Galapagos Islands, where Darwin studied and collected specimens which kept him thinking, studying and writing for the next fifty years. Darwin's new ideas – known as Evolution and Natural Selection – revolutionised the way people think about the natural world and it is still influencing scientists today – including me!

As soon as I learned about Darwin at school, I wanted to see some of the unique creatures which he studied. Not many people get to witness the natural splendour of these islands and their rare wildlife with their own eyes… and I longed to be one of the lucky few. So that is why I'm on my way to the Galapagos right now… and I'm feeling a bit sick because of the rough seas we've encountered… blergh!! I've been thinking, studying and writing about the species which live on these mesmerising islands just like Darwin and now I'm actually going, I'm full of anticipation and excitement!! Writing a diary, making notes and sketches during – what I hope will be – an awe-inspiring expedition, will provide me with a lasting memory of a trip which I've always dreamed of.

<u>Tuesday 26th March</u>

Sailing into the Galapagos Islands, I felt rather like Darwin; an intrepid explorer. I was dazzled by the sunlight on the water's surface and my eyes widened to take in the hypnotising vivid azure blue and emerald green colours. It was overwhelming and more beautiful than I ever expected.

At first, we seemed to be the only living things around. However, as I surveyed the rocky crags, I noticed the rocks… weren't rocks… but Galapagos Tortoises! These islands are actually named after these creatures and they have been known to live for more than 100 years! Strangely, they differ from tortoises on the mainland and I was amazed to see these variations for myself. Darwin discovered that the tortoises were different on each separate island; they were much larger and had different shaped shells. Incredibly, the tortoises have adapted their shells over time to help them survive on their own individual islands. The stunning tortoise I watched had a saddle-back shell. On other islands they have dome shaped shells.

Most species inherit features from both its mother and father. However, we all have natural variations or differences, which make us different from our parents. Some variations are an advantage and make survival easier but some are a disadvantage and make an individual weaker. Long ago, some of these tortoises were lucky enough to be born with the natural variation of a saddle-back shell, making survival easier as they could reach food higher off the dry ground, which other tortoises could not reach.

Darwin called this process 'natural selection'. This means, individuals with traits suited to their environment survive and weaker specimens die out. Because the adults with the adapted shell were more likely to survive, they were also more likely to reproduce and pass on the positive variation. Now all adults on this island have the saddle-back shell and therefore pass this on to all of their young, allowing the species to be fit for survival on this island and so these wonderful tortoises live on. The species has evolved, gradually changed and adapted over time. The power of nature astounds me! Darwin was a genius! I thought about this natural miracle and watched them feeding and foraging, the remarkable shell allowing them to do so with ease and charm. As the daylight now wanes, I'm glad I've shared some of their secrets.

<u>Wednesday 27th March</u>

This morning I awoke to a beautiful, melodious bird song. Looking out of the window, I saw a small finch chirping tunefully. Surely a Galapagos finch. Darwin had made sketches of these unusual finches and I had studied them at university, fascinated by their evolution. Darwin had counted about 13 different types of finch living on the Galapagos Islands. All found only on these islands, and nowhere else in the world! Originally, they all had the same shaped beaks and probably came from the mainland. But now their heads – and particularly their beaks – were not all the same. Darwin realised that each finch's beak had gradually adapted to eat the different food available on their particular island. So finches on islands where large, hard-shelled nuts were prevalent developed robust beaks, and finches on islands where insects or flowers were available developed delicate, pointy beaks. I watched an insect-eater with its long, thin beak digging out the insects. Observing intently, I tried to sketch the finch just as Darwin had. I watched the result of evolution right in front of my eyes! A-maz-ing! Right now, I am in complete awe of the intricate beauty of our natural world.

<u>Friday 29th March</u>

Today was different. I wanted to broaden my experiences, so I joined with a team of palaeontologists to explore the species which may have lived here during prehistoric times. Was evolution apparent even so long ago? I was taken on an exhausting (and sweaty!) hike through the mountains to the site where, only recently, the fossilised remains of a dwarf elephant were discovered. A dwarf elephant… it sounded like something from a fantasy story!
However, the team informed me that on small islands, large species can adapt and evolve smaller bodies so as the limited availability of food would be enough to nourish them. Wow, I'm astonished! Even millions of years ago, species were adapting and evolving so as they could try to survive! At some point though and for some reason this species became extinct. Maybe it just couldn't adapt enough. Now the delicate fossil in my hand was all that remained. Holding it carefully, I tried to imagine the animal which this fossil once was and its struggle for survival. Nature had dictated the fate of this species. Like detectives, the team here continue to investigate dwarf elephants and their fossils. I wonder what clues they will discover next!?

<u>Saturday 30th March</u>

I'm writing as I sit watching a marine iguana. Its short, blunt nose is well-adapted to feeding on sea algae. On one or two islands, marine iguanas have been seen feeding on land plants or grasshoppers, perhaps an adaptation because sea algae, at certain times of year and during certain types of weather, can be very scarce. Lately, scientists here have found that when food is scarce, the adult marine iguanas will shrink in length and then regrow as food becomes plentiful again. They can switch between growing and shrinking repeatedly throughout their life. A perfect adaptation to the food cycles in Galapagos – nature at its best!

<u>Sunday 31st March</u>

Well my time here is sadly coming to an end. I have marvelled at the incredible beauty of the natural world; observed rare species which only live on the Galapagos Islands; witnessed creatures which have adapted in magnificent ways, allowing animals to survive then reproduce meaning the adaptations can be passed on to future generations and how all this leads to evolution. Even more now, I admire and respect the variations and transformations of life in our world. Let's treasure it forever. Following in the footsteps of Charles Darwin has been a true honour.