

# Year 6 - Week 10

1

Miss J's set:

There has been a lot in the news regarding the terrible death of George Floyd a few weeks ago. Unfortunately, you will have seen that some of the rioting and looting that has been going on has become quite violent – potentially losing the reasoning for why the riots started in the beginning.

I'd like you to put yourself into George Floyd's 'shoes' and come up with either a written or spoken piece where he addresses the people of the world if he could see them and what's going on now. What would he want to say to them? Does he agree or disagree with what's going on around the world? Is violence the answer?

Miss P set:

Miss J's set:

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**Puzzle time**

**BISHOP'S MOVE**

A good idea to have some draughts pieces or counters for this puzzle. Here goes!

This appears with many different names, but a popular one seems to be Bishop's move - not sure why, but the pieces can only move like a bishop on a chess board.

|   |  |  |   |
|---|--|--|---|
| ● |  |  | ○ |
| ● |  |  | ○ |
| ● |  |  | ○ |
| ● |  |  | ○ |

There are four black counters and four white counters.

The black and white counters can only move diagonally, any number of spaces. (Just like a bishop in chess.)

**What is the least number of moves needed to get the black counters where the white ones are and the white counters where the black ones are?**

Rule:  
There is no jumping or landing on top of each other!

Idea:  
You could try this with 8 girls and boys in the playground!

Miss P set:

## Egg Drop Science Experiment



What materials could you wrap your egg in to stop it from breaking?



How many layers would you need?



Could you make a parachute for your egg?



Could you construct a case for it?



How can you make sure your test is fair?



What height will you drop the egg from?



What other materials could you test?

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## The Strangest Shop in the World

They sell in the shop:

Decision juice and barrels of confidence,  
Packets of pluck and cartons of courage  
And pure distilled industrial bravery.

They sell in the shop:

Chess pieces made from meteors,  
Leaking buckets of rainforest  
And slices of planet ring.

They sell in the shop:

Finger wags from cross professors,  
Gleams from a thousand happy eyes  
And the rhythm of a dancer.

They sell in the shop:

Water which flows uphill,  
Torches which shine dark  
And food which makes you hungry.

The shop is found:

Under a mountain,  
Rolling and bouncing along a river bed,  
Deep in a forgotten corner of the world.

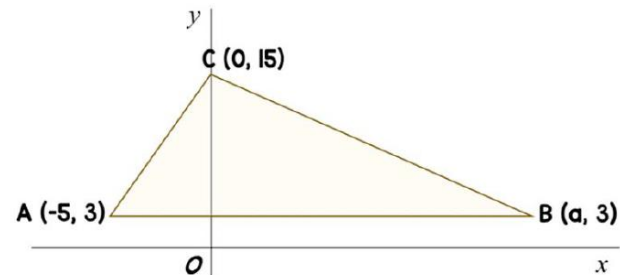
The shopkeeper is:

Serious and smiley,  
Tall and invisible,  
There and not there.



## Challenge 10

Triangle ABC is shown.



The area of ABC is 126 units<sup>2</sup>.

Find the perimeter of triangle ABC.

1. What kinds of items are in the second verse?
2. Compare shop items with third and fourth verse.  
How are the items same? How are they different?
3. How would you describe the details of the location in the fifth verse?
4. What is your impression of the shopkeeper?

# Year 6 - Week 10

2

Miss J's set:

Continue with your piece from yesterday. Remember to capture the real reason that people were demonstrating. His thankfulness for people to support him, but maybe his disappointment with some of the ways people have gone about it

Miss P set:

Plan and write your own version of the poem using the example above:

The Strangest Shop in the World

They sell in the shop:

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They sell in the shop:

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They sell in the shop:

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The shop is found:

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Miss J's set:

## Puzzle time

### Calculator - words

Did you know that you can read words on your calculator?  
You can if you turn it upside down!  
Find a calculator. Got it? Good.  
Now type in 0.7734 Turn the display upside down.

**Hello!**

Try these sums on your calculator. Turn the answer upside down and you should get a word.  
We have given you some clues so you may be able to guess the word before you start.

1.  $39459 \div 7 =$   
( Spiders have 8 but millipedes do not have millions )
2.  $15469 \times 5 =$   
( Put it to your ear and you may hear the sea.)
3. The square root of 59876644  
( It sounds like he invented the telephone.)
4.  $10\,000 - 9\,393$   
( It's easy to fall off this )
5.  $1792202 \times 3 =$   
( Put these on to see underwater )

The answer to No. 5 is not pyjamas!



There are loads more words you can make up. Try them for yourself. Can you make a five letter word?  
Can anyone make up a whole sentence?  
Can anyone find another 7 letter word, or even more?

Miss P set:

## Egg Drop Science Experiment

How will you carry out your test?

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What will you do to make your test fair?

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Record your predictions and results on the table below.

| Material | Prediction | Result |
|----------|------------|--------|
|          |            |        |
|          |            |        |

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|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <div>Challenge 9</div> <div>Mo is reading a book.</div> <div><ul style="list-style-type: none"><li>On Monday he reads <math>\frac{2}{5}</math> of the book.</li><li>On Tuesday he reads <math>\frac{1}{2}</math> of the remaining pages.</li><li>On Wednesday he reads <math>\frac{5}{9}</math> of the remaining pages.</li><li>On Thursday he reads the rest of the book.</li></ul></div> <div>Mo read 68 more pages on Tuesday than Wednesday.</div> <div>How many pages are there in the book?</div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3 | <div>Miss J's set:</div> <div>So after being very ill last week (poor Miss Jones couldn't eat because her mouth was very sore) I managed to get to McDonald's and finally get myself a cheeseburger and chips after more than 10 weeks!</div> <div>I want to know what your favourite meal is and why? Describe it to me – perhaps you could try to describe it without letting me know what meal it is until the end? See if I can guess it? It doesn't have to be a takeaway – it's probably better if it isn't – especially for your health!</div> <div>Miss P set:</div> <div>Continue the poem and edit. Make sure you make the poem as interesting as possible.</div> | <div>Miss J's set:</div> <div><div><div>© MathSphere    www.mathsphere.co.uk</div><div><div><div>Puzzle time</div><div>Loose change</div></div><div></div></div><div>Here's an interesting little puzzle for you.</div><div>You may need to raid your piggy bank or find some other loose change to help you answer this one!</div><div></div><div>I have a whole load of coins in my pocket, but I do not have exact change for one pound.</div><div>What is the maximum possible amount of change I could have in my pocket if I do not have any £2 coins?</div><div>Remember there are 1p, 2p, 5p, 10p, 20p, 50p, £1.</div><div></div></div></div> | <div>You will need:</div> <div><div><div>A box of raw eggs</div><div>Newspaper</div><div>A roll of paper towel</div><div>Straws</div><div>Old socks</div></div><div><div>Balloons</div><div>String</div><div>Fabric</div><div>Scissors</div><div>Masking tape</div></div><div></div></div> <div>In this experiment, you are going to investigate if you can drop an egg without breaking it.</div> <div><div><div>1. With your partner, think about four ways you could test your egg.</div><div>2. Use the prompt sheet to help you to plan your investigation.</div><div>3. Consider how you are going to make the experiment a fair test.</div><div>4. Record your predictions on the record sheet.</div><div>5. Test your egg to see if you can stop it from breaking.</div><div>6. Record your results on the record sheet. Were your predictions correct?</div></div></div> |

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|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <div><div><h3>Challenge 8</h3><p>Lisa has this squared grid.</p><div><table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table></div><p>She shades some squares green so that the ratio of green squares to white squares is 1:2.</p><p>She shades some more squares green so that the ratio of green squares to white squares is 4:1.</p><p>How many more squares did Lisa need to shade?</p></div></div> |                                                                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 4 | <div><div><p>Miss J’s set:</p><p>Continue with the description of your favourite meal.</p><p>Have you varied your sentence starters? Included appropriate and apt vocabulary? Varied the lengths of the sentences you’ve used and the punctuation you’ve chosen?</p><p>Miss P set:</p><div><div><p>You are hiding under a shelf from a crazy shopkeeper. You need to cough but if you do he will hear you. Do you throw something across the floor to cover the noise of your cough or just try not to cough?</p><div><div>Throw something</div><div>Don’t cough</div></div></div></div></div></div> | <div><p>Miss J’s set:</p></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <div><p>Continue science experiment with different materials.</p></div> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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## Puzzle time

### Code breaker



A code is a way of writing a message in secret.  
The code below is very easy.  
Each letter of the alphabet is replaced by a number.  
Send your message in numbers and then your friend  
can use the de-coder to find out what it says.

### THE DE-CODER

|    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| A  | B  | C  | D  | E  | F  | G  | H  | I  | J  | K  | L  | M  |
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 |
|    |    |    |    |    |    |    |    |    |    |    |    |    |
| N  | O  | P  | Q  | R  | S  | T  | U  | V  | W  | X  | Y  | Z  |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |

So, if I want to write 'hello' I would write 8 for  
H, 5 for E, 12 for L and 12 for L again and  
then 15 for O.

My code would be 8 5 12 12 15

Now try and work out what this says.

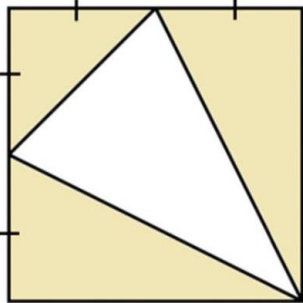


The code:

|   |    |  |    |    |    |   |    |   |    |    |   |   |    |    |
|---|----|--|----|----|----|---|----|---|----|----|---|---|----|----|
| 9 |    |  | 1  | 13 |    | 2 | 18 | 9 | 12 | 12 | 9 | 1 | 14 | 20 |
| 1 | 20 |  | 13 | 1  | 20 | 8 | 19 |   |    |    |   |   |    |    |

Miss P Set:

# Year 6 - Week 10

|   |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                      |                                                                            |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
|   |                                                                                                                                                                                                                                                                                                                     | <p><b>Challenge 7</b></p> <p>The diagram shows a square. The square has been divided into 4 triangles. What fraction of the square is shaded?</p>  |                                                                            |
| 5 | <p>Miss J's set:<br/>Can you publish your description of your favourite meal? Maybe you could send us a picture of you with your favourite meal too – especially if you've helped to make it!</p> <p>Miss P set:<br/>Write a short story using yesterday's plan. Make sure you proofread and edit your writing.</p> | Miss J's set:                                                                                                                                                                                                                        | What did you find out? Write up your science experiment and send it to us! |

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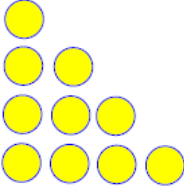
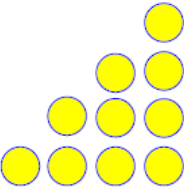


## Puzzle time

### Counter reflection

Sometimes the easiest things are the most annoying - when you can't do them! Have a go at this:

change                      into



Sounds easy - eh!  
But there is a snag!

You can only move  
three counters!!

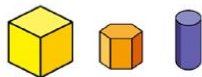


Miss P Set:

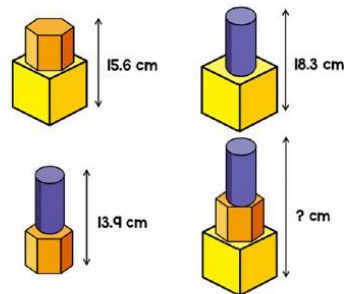
# Year 6 - Week 10

## Challenge 6

Liam has these three shapes.



He uses them to make different towers. He measures the height of each tower he makes.



Liam stacks all three shapes to make one tall tower. How tall is the tower?