

## Tenbury High Ormiston Academy Maths Department

### Stage 7 Home Learning project Spring term 2

Name: .....

Maths teacher: .....

LMG: .....

If you have any problems with any of the tasks then please ask your class teacher or pop along to homework club on Tuesday, Wednesday or Thursday lunchtimes.

For assessment criteria please see the school websites new homework page.

All tasks should be completed in your maths book and clearly labelled homework.

Task 1: Mathematical definitions

Write a definition for each of the following terms and give an example where possible.

<b>Calculating fractions, decimals and percentages</b>	<b>Solving equations and inequalities</b>
Simplify	Algebra
Proper fractions	Equation
Improper fractions	Operation
Multiplier	Solve
Percentage	Brackets
Increase	Substitute
Decrease	Unknown

## TASK 2: Complete each of the tasks below.

Equations: Reversing, bar models, rearranging, solving

Memory - inverse



Literacy  
Write these keywords  
in alphabetical order

equation  
solution  
expression  
reverse  
equal  
inverse  
solve

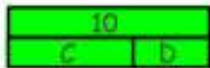
A, B, C, D, E, F, G

Skill 1 - Reversing with numbers

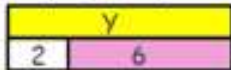
- a)  $8 + 2 = 10$   
 $2 = 10 - \dots\dots$   
 $8 = 10 - \dots\dots$
- b)  $7 + 4 = \dots\dots$   
 $7 = \dots\dots\dots\dots\dots$   
 $4 = \dots\dots\dots\dots\dots$
- c)  $13 - 5 = \dots\dots$   
 $13 = \dots\dots\dots\dots\dots$   
 $13 - \dots\dots = \dots\dots$
- d)  $4 \times 2 = \dots\dots$   
 $4 = \dots\dots\dots\dots\dots$   
 $2 = \dots\dots\dots\dots\dots$

Help Card 1 - Using pictures

$$C + D = 10$$



$$Y - 2 = 6$$

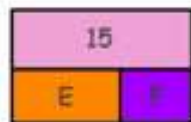


Skill 2 - Draw a bar picture & label it for each equation.

- a)  $F + G = 17$   
 b)  $7 + H = Q$   
 c)  $P + T = W$   
 d)  $M - 3 = 7$   
 e)  $G - 4 = 11$   
 f)  $V - J = K$



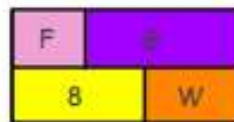
Skill 3 - Write 3 different equations for each bar picture



1.



2.



3.

Help Card 2:  $X +$



$$5K = 15$$

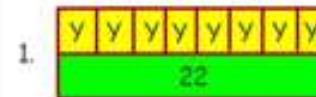
$$15 \div 5 = K$$

Skill 4 - Draw a bar picture with labels

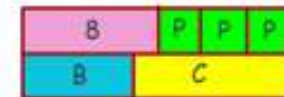
- a)  $3M = 7$   
 b)  $4L = 13$   
 Challenge pictures  
 c)  $2Y + Z = 8$   
 d)  $3P + W = 11$   
 e)  $2H - 3 = 17$



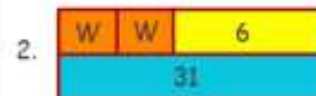
Skill 5 - Write 2 (or more) equations for each bar diagram



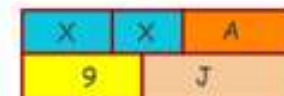
1.



3.



2.



4.

Stretch A - Draw diagrams and/or use reverse operations to help solve these equations

- a)  $A + 7.5 = 18$   
 b)  $B - 0.3 = 6.2$   
 c)  $8C = 20$   
 d)  $3H + 2 = 10$   
 e)  $7Y + 4 = 14.5$   
 f)  $3W - 0.3 = 3$



Stretch B - Draw a bar picture & write the equation for each question.

- 1) The total cost of six apples and one banana is £5.  
 2) A cheese sandwich and two bags of crisps costs £4.50.  
 3) Joe has £20. He buys a CD and a chocolate bar. He has £8 left.  
 4) Sam has £50. He buys three books, a T-shirt and a pair of socks. He has £X left.



Stretch C - Application of knowledge - Solving equations

- a) I think of a number, I add 4 and then multiply by 5. The answer is 25.5 so what number did I think of? ( Show how you got an answer)
- b) I think of a number, I halve it and then I add 6. Next I multiply by 3 to arrive at an answer of 12. What number did I start with? (Show)

### Task 3: Computer based homework task

Using [www.corbettmaths.com](http://www.corbettmaths.com) watch the following videos and answer the questions set in your homework book.  
You must show all your working out.

#### **Video 133** Adding and subtracting fractions

Green	Amber	Red	Killer
Textbook exercise Q1 (a-h) and Q2 (a-d)	Textbook exercise Q1 (i - p) and Q2 (e-h) and Q3 (a-d)	Textbook exercise Q3 (e-h) and Apply questions 1-5	Textbook exercise Q3 (i-l) and Apply questions 6-11

#### **Video 134** Dividing fractions

Green	Amber	Red	Killer
Textbook exercise Q1 (a-h) and Q2 (a-d)	Textbook exercise Q1 (i - p) and Q2 (e-h)	Textbook exercise Q3 (a-d) and Apply questions 1-3	Textbook exercise Apply questions 1 - 8

#### **Video 142** Multiplying fractions

Green	Amber	Red	Killer
Textbook exercise Q1 (a-h) and Q2 (a-d)	Textbook exercise Q1 (i - p) and Q2 (e-h)	Textbook exercise Q3 (a-d) and Apply questions 1-3	Textbook exercise Apply questions 1-8