

## Theme 4 Revision

1) Evaluate:

a)  $928 \times 57$

b)  $7.8 \times 0.06$

c)  $300 \times 0.7$

d)  $\frac{1}{6} \times 24$

e)  $\frac{4}{5} \times \frac{15}{18}$

f)  $3\frac{3}{4} \times \frac{9}{10}$

2) What multiplication is the grid below trying to calculate?

Finish the calculation to find the product

	100	8
50		
7		

3) Expand and simplify:

a)  $4(2x - 3)$

b)  $x(3x + 7)$

c)  $5x(3x - 1)$

d)  $4(x - 3) + 2(3x + 7)$

e)  $3(2x + 5) - 2(x - 9)$

4) Fully factorise

a)  $15x + 20$

b)  $9x + 3$

c)  $5x^2 - 7x$

d)  $6x^2y - 9xy$

5) Evaluate

a)  $-3 \times 5$

b)  $-9 \times -4$

c)  $\frac{4}{21} \times 14$

d)  $\frac{3}{4} \times 60$

e)  $(-5)^2$

f)  $-3 \times -6 + 4 \times -7$

6) Find the 20<sup>th</sup> term in the sequence defined by:

$$n^{\text{th}} \text{ term} = 4n + 3$$

7) Find the nth term of the following linear sequences

- a) 11, 14, 17, 20, ...      b) 101, 102, 103, 104, ...      c) 13, 11, 9, 7, ...

8) Find the missing value given as a letter

- a)  $-3 \times a = 24$       b)  $0.6 \times b = 0.042$       c)  $\frac{2}{3} \times \frac{c}{4} = 1\frac{1}{6}$

9) 8 hammocks cost £560, find the cost of 5 hammocks

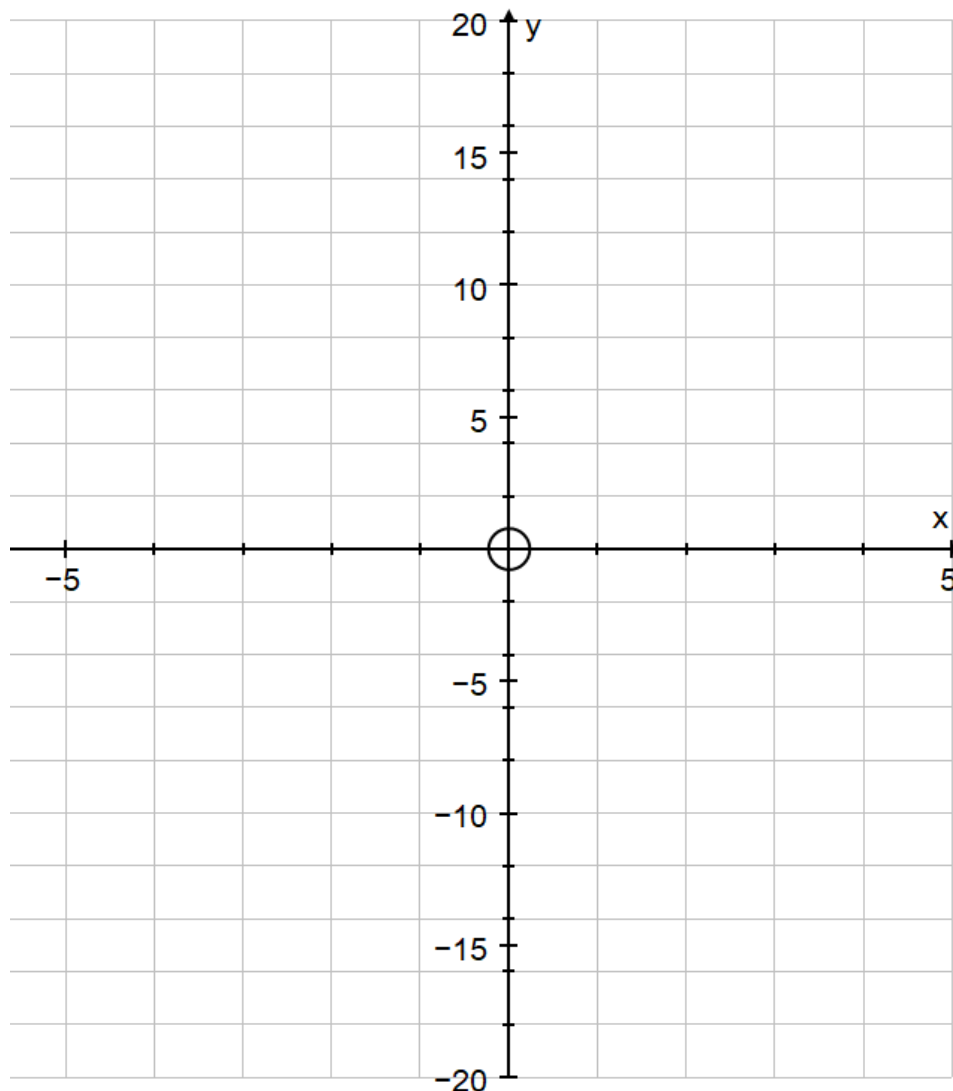
10) Use the suggested  $x$  values to plot these two lines on the axes provided

a)  $y = 3x$

b)  $y = 2x - 7$

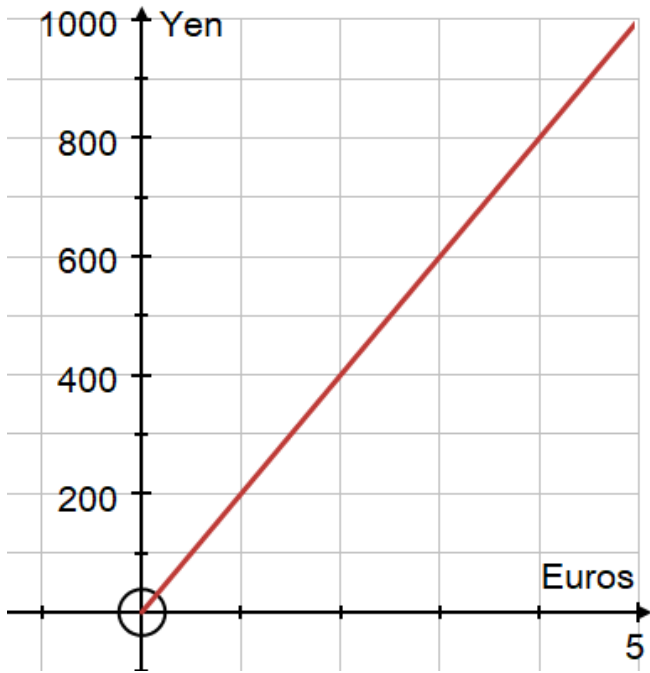
$x$	2	5	-3
$y$			

$x$	1	4	-5
$y$			

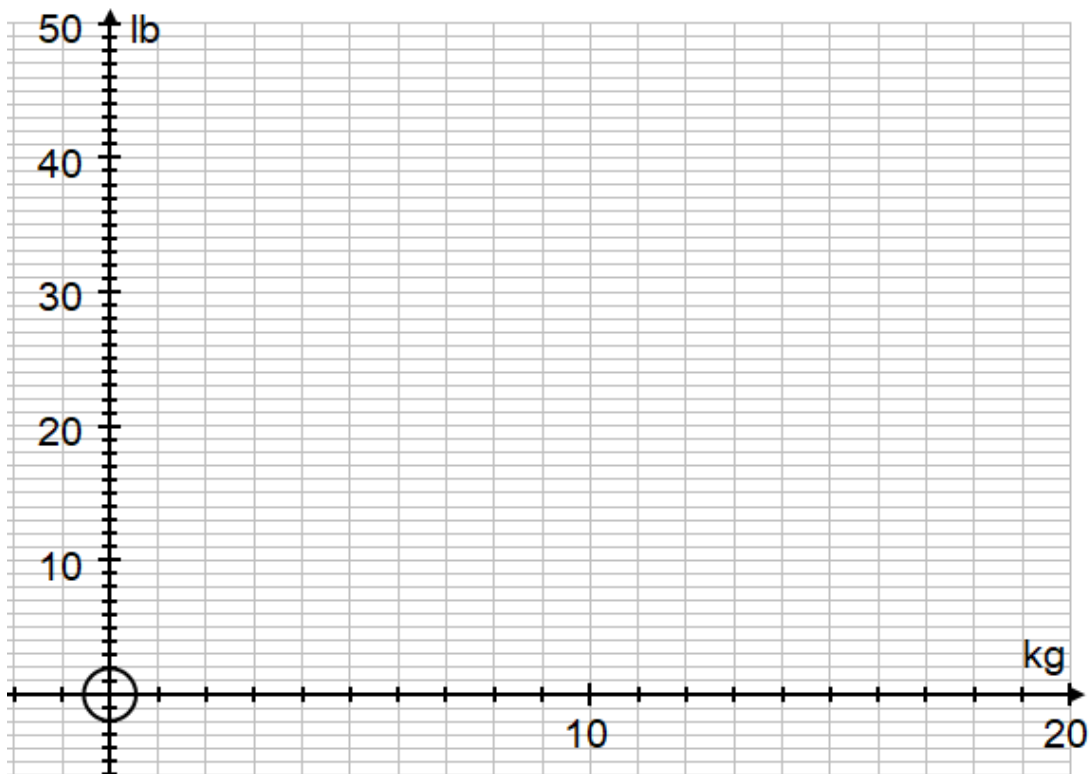


11) In a recipe to make 12 brownies, you need to use 300g chocolate and 480g of sugar.  
How much of each ingredient do you need to make 15 brownies?

12) The graph below converts between Euros and Yen



- a) Use the graph to convert 4 Euros into Yen
  - b) Use the graph to approximate the value of 350 Yen in Euros
  - c) Use the graph to convert 2000 Euros into Yen
- 13) Given that 10kg is 22lbs, use this information to draw a conversion graph between kg and lbs using the axes below



Use this graph to convert 38lbs into kg

## Answers

1a) 52896 b) 0.468 c) 210 d) 4 e)  $\frac{2}{3}$  f)  $3\frac{3}{8}$  2)  $108 \times 57 = 6156$  3a)  $8x - 12$

b)  $3x^2 + 7x$  c)  $15x^2 - 5x$  d)  $10x + 2$  e)  $4x + 33$  4a)  $5(3x + 4)$  b)  $3(3x + 1)$

c)  $x(5x - 7)$  d)  $3xy(2x - 3)$  5a) -15 b) 36 c)  $\frac{8}{3}$  d) 45 e) -10 6) 83 7)  $3n+8$

b)  $n+100$  c)  $-2n+15$  8a) -8 b) 0.07 c) 7 9) £350 10a) 6, 15, -9 b) -5, 1, -17

11) 375g chocolate 600g sugar 12a) 800 b)  $\sim 2.7-2.8$  c) 400,000 13) 17-18