



## ALL IN ONE PLACE BASE CAMP VERBAL REASONING ACTIVITY 19A NUMBER AND LETTER CALCULATIONS

### INSTRUCTIONS

- Spend about 60 minutes on the activity
- Write your answers on this activity sheet
- If you can't answer a question – move on
- Use the solution sheet to check your work
- Ask family member or teacher to clarify questions you found difficult or didn't understand

## INTRODUCTION

This Verbal Reasoning paper has three levels of increasing difficulty. Each level has 24 questions.

Check your answers and work out your percentage after completing a level.

If you can't answer to a question, move on. You can always go back to questions you were unable to answer. When you know that you have got some questions correct and out of the way, working on what you find challenging is not that bad!

### LEVEL 1: EASY

You should work through these questions quickly. The questions will help you understand how to answer this type of Verbal Reasoning question.

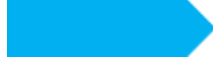
### LEVEL 2: OKAY

Most of the questions you'll get in your Common Entrance Verbal Reasoning Examination should be at this level.

### LEVEL 3: THE CHALLENGE

These questions extend your Verbal Reasoning skills. You'll probably get a few questions at this level and ace your exam!





## NUMBER AND LETTER CALCULATIONS

In these Verbal Reasoning questions, you'll practice your Maths skills and work out the answers to calculations.

Here are examples of each type of question you'll do in this activity.

### EXAMPLE 1: FINDING THE ANSWER AS A LETTER

<b>a = 4   b = 8   c = 6</b>	
<b>Calculate the answer to</b>	<b>a + b - c</b>
<b>Your ANSWER as a letter</b>	

### EXAMPLE 2: FINDING THE ANSWER AS A NUMBER

<b>a = 3   b = 2   c = 7   d = 1   e = 11</b>	
<b>Calculate the answer to</b>	<b>(a + b)<sup>2</sup> - 2d + e</b>
<b>Your ANSWER as a number</b>	

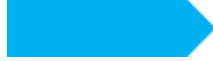
## ANSWERS

### EXAMPLE 1: FINDING THE ANSWER AS A LETTER

<b>a = 4   b = 8   c = 6</b>	
<b>Calculate the answer to</b>	<b>a + b - c</b>
<b>Your ANSWER as a letter</b>	<b>c</b>

### REASONING

Easy example!  $4 + 8 = 12$  and  $12 - 6 = c$ . The letter **c** represents the number 6.



**EXAMPLE 2: FINDING THE ANSWER AS A NUMBER**

<b>a = 3   b = 2   c = 7   d = 1   e = 11</b>	
<b>Calculate the answer to</b>	<b><math>(a + b)^2 - 2d + e</math></b>
<b>Your ANSWER as a number</b>	
<b>34</b>	

**REASONING**

$a + b = 5$  and  $5^2 = 25$

$2d = 2 \times 1 = 2$  so  **$(a + b)^2 - 2d = 25 - 2 = 23$**

$e = 11$  so  $23 + 11 = 34$

You may be given on or more number that is not needed in a calculation. Don't worry, additional numbers are there to make sure that you can select the correct ones to use in the calculation.

**LEVEL 1: EASY**



**JUMP 1**

<b>a = 2   b = 5   c = 1</b>	
<b>Calculate the answer to</b>	<b><math>a + 2a + c</math></b>
<b>Your ANSWER as a letter</b>	



**JUMP 2**

<b>a = 3   b = 5   c = 7</b>	
<b>Calculate the answer to</b>	<b><math>2a + 2b - c</math></b>
<b>Your ANSWER as a number</b>	



### JUMP 3

<b>a = 4   b = 10   c = 2   d = 4</b>	
Calculate the answer to	<b><math>2a + 2c - d</math></b>
Your ANSWER as a letter	



### JUMP 4

<b>a = 2   b = 6   c = 3</b>	
Calculate the answer to	<b><math>ab - 3c</math></b>
Your ANSWER as a number	



### JUMP 5

<b>a = 2   b = 3   c = 4</b>	
Calculate the answer to	<b><math>2ab \div c</math></b>
Your ANSWER as a letter	



### JUMP 6

<b>a = 2   b = 6   c = 8</b>	
Calculate the answer to	<b><math>2ab - 4c</math></b>
Your ANSWER as a number	



**JUMP 15**

$l = 3 \quad m = 1 \quad n = 0$	
Calculate the answer to	$l - 3m + n$
Your ANSWER as a letter	



**JUMP 16**

$l = 5 \quad m = 11 \quad n = 2$	
Calculate the answer to	$(m - n) \times l$
Your ANSWER as a number	



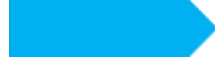
**JUMP 17**

$l = 2 \quad m = -2 \quad n = 4$	
Calculate the answer to	$4l + n + 2m$
Your ANSWER as a letter	



**JUMP 18**

$l = -1 \quad m = -3 \quad n = -5$	
Calculate the answer to	$l \times m \times n$
Your ANSWER as a number	




**JUMP 23**

$t = 9 \quad u = 5 \quad v = 3 \quad w = 4 \quad x = 8$	
Calculate the answer to	$(t + x + v) \div w$
Your ANSWER as a letter	



**JUMP 24**

$t = -3 \quad u = -1 \quad v = 2$	
Calculate the answer to	$(t + v) \times (t + u)$
Your ANSWER as a number	

<p><b>STOP AND CHECK</b></p>  <p>checkpoints</p>	<b>SCORE OUT OF 24</b>
	<b>PERCENTAGE</b>

## LEVEL 2 : OKAY



### JUMP 1

$a = -2 \quad b = -3 \quad c = -4 \quad d = -5$	
Calculate the answer to	$b + c - d$
Your ANSWER as a letter	



### JUMP 2

$a = -2 \quad b = -3 \quad c = -4 \quad d = -5$	
Calculate the answer to	$(a - b) \times (c - d)$
Your ANSWER as a number	



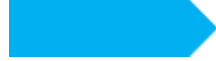
### JUMP 3

$a = 9 \quad b = 6 \quad c = 3 \quad d = 1$	
Calculate the answer to	$9 \div (b + 3d)$
Your ANSWER as a letter	



### JUMP 4

$e = 6 \quad f = 7 \quad g = 5 \quad h = -2$	
Calculate the answer to	$h \times (e - f) + g$
Your ANSWER as a number	



**JUMP 5**

<b>e = 6   f = 7   g = 5   h = -2</b>	
<b>Calculate the answer to</b>	<b>f - g - 2h</b>
<b>Your ANSWER as a letter</b>	



**JUMP 6**

<b>e = 6   f = 7   g = 5   h = -2</b>	
<b>Calculate the answer to</b>	<b>e<sup>2</sup> + h<sup>2</sup> - (f - g)</b>
<b>Your ANSWER as a number</b>	



**JUMP 7**

<b>i = 4   j = 6   k = 12   l = 20</b>	
<b>Calculate the answer to</b>	<b>(l + i) ÷ i</b>
<b>Your ANSWER as a letter</b>	



**JUMP 8**

<b>f = 3   g = 9   h = -5   j = -7</b>	
<b>Calculate the answer to</b>	<b>(j + h)<sup>2</sup> + g ÷ f</b>
<b>Your ANSWER as a number</b>	





**JUMP 21**

<b>c = -2   d = -4   e = 3   f = 2   g = 6</b>	
<b>Calculate the answer to</b>	<b><math>(c + d) + 2e + g</math></b>
<b>Your ANSWER as a letter</b>	



**JUMP 22**

<b>l = 12   m = 3   n = 7   o = -3</b>	
<b>Calculate the answer to</b>	<b><math>o \div m \times (m + o) \times mn</math></b>
<b>Your ANSWER as a number</b>	



**JUMP 23**


<b>l = 11   m = 22   n = 1   o = 2</b>	
<b>Calculate the answer to</b>	<b><math>m \div l \times n</math></b>
<b>Your ANSWER as a letter</b>	



**JUMP 24**

<b>a = 45   b = 15   c = 5   d = 3</b>	
<b>Calculate the answer to</b>	<b><math>(a \div b)^2 - d^2 + c</math></b>
<b>Your ANSWER as a number</b>	



<p><b>STOP AND CHECK</b></p>  <p>checkpoints</p>	<p><b>SCORE OUT OF 24</b></p>
	<p><b>PERCENTAGE</b></p>

### LEVEL 3: THE CHALLENGE



#### JUMP 1

<p><b>a = 3   b = 7   c = 5   d = 8   e = 4   f = 2</b></p>	
<p><b>Calculate the answer to</b></p>	<p><b><math>2d - fa - c</math></b></p>
<p><b>Your ANSWER as a letter</b></p>	



#### JUMP 2

<p><b>a = 3   b = 7   c = 5   d = 8   e = 4   f = 2</b></p>	
<p><b>Calculate the answer to</b></p>	<p><b><math>2ac^2 + (2ac)^2</math></b></p>
<p><b>Your ANSWER as a number</b></p>	



**JUMP 4**

<b>p = 4   q = -4   r = 16   s = 8</b>	
<b>Calculate the answer to</b>	<b><math>s^2 + (q - p)^2 - 4r</math></b>
<b>Your ANSWER as a number</b>	



**JUMP 7**

<b>v = 3   w = 8   x = 1   y = 0   z = 4</b>	
<b>Calculate the answer to</b>	<b><math>3v + y^2 - x^2</math></b>
<b>Your ANSWER as a letter</b>	



**JUMP 8**

<b>a = 5   b = -6   c = 4   d = 11   e = 12</b>	
<b>Calculate the answer to</b>	<b><math>a^2 + (d - e)^2 + (c + b)^2</math></b>
<b>Your ANSWER as a number</b>	



**JUMP 9**

<b>a = 4   b = 6   c = 10   d = 12   e = 2   f = 8</b>	
<b>Calculate the answer to</b>	<b><math>(ab - 2c)^2 - d</math></b>
<b>Your ANSWER as a letter</b>	



**JUMP 13**

<b>m = 2   n = 5   o = 8   p = 12   q = 16</b>	
Calculate the answer to	$(q \div o) \times (o \div m)$
Your ANSWER as a letter	




**JUMP 23**

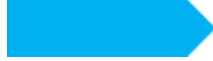
<b>a = 0.5   b = 1.25   c = 0.25   d = 0.75</b>	
Calculate the answer to	$b - 2a + 2d - 2c$
Your ANSWER as a letter	



**JUMP 24**

<b>a = 6   b = 0.6   c = 8   d = 0.1</b>	
Calculate the answer to	$(a \div d)^2 - (b \times c)$
Your ANSWER as a number	

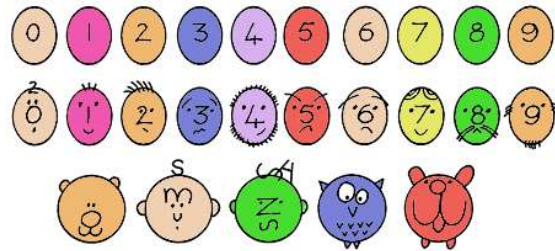
<p><b>STOP AND CHECK</b></p>  <p>checkpoints</p>	<b>SCORE OUT OF 24</b>
	<b>PERCENTAGE</b>



## YOU TEACH!

Make up three examples of the two types of question from this activity. Each question should be more difficult than the one before – use the 'EASY', 'OKAY' and 'THE CHALLENGE' approach. Vary your questions using BIDMAS. For example:

- make sure your friends understand the order of operations in arithmetic
- have at least one question without brackets
- have at least one question with brackets



Give your questions to some friends and check how they go. Is their BIDMAS up to scratch?





Cut and paste the **CHECK POINT** into your workbook.



**CHECK POINT VERBAL REASONING ACTIVITY 19A  
NUMBER AND LETTER CALCULATIONS**

My score for this activity was \_\_\_\_\_/75

My percentage for this activity was \_\_\_\_\_ %

This activity was easy because \_\_\_\_\_

\_\_\_\_\_

This activity was difficult because \_\_\_\_\_

\_\_\_\_\_