Varied Fluency Step 9: Find Pairs of Values 1

National Curriculum Objectives:

Mathematics Year 6: (6A4) Find pairs of numbers that satisfy an equation with two unknowns

Differentiation:

Developing Questions to support finding pairs of values using all 4 operations and whole numbers less than 20.

Expected Questions to support finding pairs of values using all 4 operations and whole numbers.

Greater Depth Questions to support finding pairs of values using all 4 operations and whole numbers, decimals, fractions and negative numbers.

More Year 6 Algebra resources.

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Varied Fluency – Find Pairs of Values 1 – Teaching Information

Find Pairs of Values 1		Find Pairs of Values 1	
1a. Match the pairs of numbers to the equations.		1b. Match the pairs of numbers to the equations.	
12 ÷ 4	$a \div b = 3$	18 – 11	<i>a</i> + <i>b</i> = 18
9 x 2	<i>c</i> – <i>d</i> = 7	3 x 6	c-d=7
19 – 12	<i>e</i> x <i>f</i> = 18	7 + 13	<i>e</i> x <i>f</i> = 18
15 ÷ 3	<i>j</i> ÷ <i>k</i> = 5	16 + 2	<i>j</i> + <i>k</i> = 20
合	VF	合	VF
2a. Which set of values is out?	the odd one	2b. Which set of values is the odd one out?	
r x s =	: 18	r x s = 12	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		$\begin{array}{c} r = 3 \\ s = 6 \end{array} \qquad \begin{array}{c} r = 2 \\ s = 6 \end{array}$	$\begin{array}{c} r = 3\\ s = 4 \end{array}$
企	VF	企	VF
3a. Tick the options that satisfy the equation.		3b. Tick the options that satisfy the equation.	
n – m	= 13	n + m	= 18
A. <i>n</i> = 19	<i>m</i> = 6	A. <i>n</i> = 12	<i>m</i> = 6
B. <i>n</i> = 20	<i>m</i> = 5	B. <i>n</i> = 15	<i>m</i> = 3
C. <i>n</i> = 17	<i>m</i> = 4	C. <i>n</i> = 17	<i>m</i> = 2
D. n = 16	<i>m</i> = 5	D. n = 8	<i>m</i> = 11 _{VF}
4a. Iqbal can only find 2 pairs of integer values for x and y. How many more are there?		4b. Simone can only find integer values for x and y more are there?	3 pairs of 9. How many
$x \times y$	= 10	x + y	= 7
~		<u>~</u>	
			VF

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Varied Fluency – Find Pairs of Values 1 – Year 6 Developing

Find Pairs of Values 1		Find Pairs of Values 1	
5a. Match the pairs of numbers to the equations.		5b. Match the pairs of ne equations.	umbers to the
18 + 22	<i>a</i> x <i>b</i> = 40	71 – 47	<i>a</i> ÷ <i>b</i> = 12
12 x 6	<i>c</i> + <i>d</i> = 40	72 ÷ 3	<i>c</i> – <i>d</i> = 24
51 + 21	<i>e</i> x <i>f</i> = 72	97 – 85	<i>e</i> ÷ <i>f</i> = 24
5 x 8	<i>j</i> + <i>k</i> = 72	96 ÷ 8	<i>j</i> – <i>k</i> = 12
	VF	合	VF
6a. Which set of values is th out?	he odd one	6b. Which set of values is the odd one out?	
r x s =	48	r x s = 42	
$\begin{array}{c} r = 4 \\ s = 12 \end{array} \qquad \begin{array}{c} r = 6 \\ s = 8 \end{array}$	$\begin{array}{c} r = 7\\ s = 6 \end{array}$	$\begin{array}{c} r = 7\\ s = 6 \end{array} \qquad \qquad$	r = 13 $s = 4$
	VF		VF
7a. Tick the options that satisfy the equation.		7b. Tick the options that satisfy the equation.	
n + m =	= 54	n – m	= 36
A. <i>n</i> = 18 <i>m</i>	n = 36	A. <i>n</i> = 66	<i>m</i> = 33
B. <i>n</i> = 25 <i>m</i>	<i>n</i> = 31	B. <i>n</i> = 36	<i>m</i> = 27
C. <i>n</i> = 39 <i>m</i>	<i>t</i> = 15	C. <i>n</i> = 81	<i>m</i> = 45
$\sum_{k=1}^{\infty} D. n = 27 \qquad m$	n = 29	D. n = 50	<i>m</i> = 24 VF
8a. Sophie can only find 7 pairs of integer values for x and y. How many more are there?		8b. Joseph can only find values for <i>x</i> and <i>y</i> . How there?	l 3 pairs of integer many more are
x + y =	= 11	$x \times y$	= 18
	VF		VF

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Varied Fluency – Find Pairs of Values 1 – Year 6 Expected

9a. Match the pairs of numbers to the equations.	9b. Match the pairs of numbers to the equations.	
-18 + 31 <i>a</i> - <i>b</i> = 11.1	-47 – 13 <i>a</i> ÷ <i>b</i> = 17	
23.2 – 12.1 <i>c</i> + <i>d</i> = 13	12.5 x 5 $c - d = -60$	
49 ÷ 7 <i>e</i> ÷ <i>f</i> = 7	5.5 x 12 $e x f = 62.5$	
31.4 – 12.5 <i>j</i> – <i>k</i> = 18.9	68 ÷ 4 j x k = 66	
	/F VF	
10a. Which set of values is the odd one out?	10b. Which set of values is the odd one out?	
r + s = -15.6	r - s = 13.7	
$\begin{array}{c} r = 29.4 \\ s = -45 \end{array} \begin{array}{c} r = 3.7 \\ s = -12.9 \end{array} \begin{array}{c} r = -3.1 \\ s = -12.5 \end{array}$	$\begin{array}{c} r = 5.8\\ s = -7.9 \end{array} \begin{array}{c} r = -2.2\\ s = -15.9 \end{array} \begin{array}{c} r = 4.3\\ s = -11.5 \end{array}$	
	VF VF	
11a. Tick the options that satisfy the equation.	11b. Tick the options that satisfy the equation.	
$n \times m = 10$	<i>n</i> + <i>m</i> = 40	
A. $n = 0.25$ $m = 40$	A. <i>n</i> = -32 <i>m</i> = 72	
B. <i>n</i> = 84 <i>m</i> = 73	B. $n = 12$ $m = 3$	
C. $n = \frac{3}{4}$ $m = 12$	C. $n = 27.5$ $m = 12.5$	
rightarrow D. $n = 2.5$ $m = 4$	D. <i>n</i> = 48 <i>m</i> = 8	
12a. Jameela can only find 8 pairs of integer values below 30 for <i>x</i> and <i>y</i> . How many more are there?	12b. Kobi can only find 11 pairs of integer values below 20 for x and y. How many more are there?	
$x \div y = 3$	x - y = -2	
	VF VF	

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Varied Fluency – Find Pairs of Values 1 – Year 6 Greater Depth

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Developing

1a.	12 ÷ 4		$a \div b = 3$	
	9 x 2	$ \searrow $	c-d=7	
	19 – 12		<i>e</i> x <i>f</i> = 18	
	15 ÷ 3		j ÷ k = 5	
2a. <u>r</u> = 2, <u>s</u> = 8				



4a. 2 more

Expected



8a. 5 more

<u>Greater Depth</u>



Developing



3a. A and B

4a. 5 more

Expected



6a. *r* = 13, *s* = 4 7a. C 8a. 3 more

Greater Depth



10a. *r* = 4.3, *s* = -11.5 11a. A and C 12a. 7 more



varied Fluency – Find Pairs of Values 1 ANSWERS

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