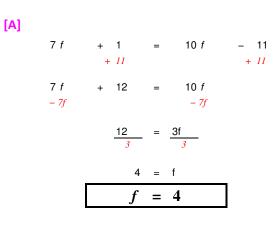
Copy and o	: Linear equations with unknowns on both sides complete each problem into your exercise book and solve for t ur working. Set your working out clearly and neatly as you have been		Name: http://www.learnersgrid.com			
[A]	7f + 1 = 10f - 11	[B]	29n – 9 = 19n + 101			
[C]	11y + 1 = 17y - 53	[D]	19d - 13 = 13d + 65			
[E]	10k + 1 = 15k - 34	[F]	34d – 13 = 23d + 53			
Round your answers to the below equations to 1 d.p., if necessary						
[G]	13.3n + 2 = 16.3n - 31.9	[H]	21f - 6 = 14f + 48.6			
[J]	14.5d + 2 = 18.5d - 48	[K]	27d - 12 = 16d + 49.6			

ANSWERS

ALGEBRA: Linear equations with unknowns on both sides

Copy and complete each problem into your exercise book and solve for the variable. *Show all your working. Set your working out clearly and neatly as you have been taught!*



[C]

$$11 y + 1 = 17 y - 53 + 53$$

$$11 y + 54 = 17 y - 11y$$

$$-11y - 11y - 11y$$

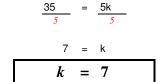
$$\frac{54}{6} = \frac{6y}{6}$$

$$9 = y$$

$$y = 9$$

[E]

10 <i>k</i>	+ 1	= 15 <i>k</i>	- 34
	+ 34		+ 34
10 <i>k</i>	+ 35	= 15 <i>k</i>	
– 10k		– 10k	



Name:

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[B]

$$29 n - 9 = 19 n + 101 + 9$$

$$29 n = 19 n + 101 + 9$$

$$29 n = 19 n + 110 - 19n - 19n - 19n$$

$$\frac{10n}{10} = \frac{110}{10}$$

$$n = 11$$

[D]

19 <i>d</i>	- 13 + <i>13</i>	=	13 <i>d</i>	+ 65 + <i>13</i>
19 <i>d</i> - <i>13d</i>		=	13 d – <u>13d</u>	+ 78

$$\frac{-6d}{6} = \frac{-78}{6}$$
$$d = 13$$

[F]

÷.,							
	34 d	-	13	=	23 d	+	53
		4	- 13			+	- 13
	34 d			=	23 d	+	66
_	23d				– 23d		

11d	=	66	
11		11	
d	=	6	

[G]

$$13.3 n + 2.0 = 16.3 n - 31.9 + 31.9 + 31.9$$

$$13.3 n + 33.9 = 16.3 n - 13.3n$$

$$\frac{33.9}{3} = \frac{3n}{3}$$

$$11.3 = n$$

$$11.3 = n$$

$$n = 11.3$$
[J]

$$14.5 d + 2.0 = 18.5 d - 48.0 + 48.0 + 48.0$$

$$14.5 d + 50.0 = 18.5 d - 48.0 + 48.0$$

$$\frac{50.0}{4} = \frac{4d}{4}$$

12.5 = d
 $d = 12.5$

Γ

[H]

21.0 f	- 6.0 + 6.0	=	14.0 <i>f</i>	+ 48.6 + 6.0
21.0 <i>f</i> - <i>14f</i>		=	14.0 <i>f</i> - <i>14f</i>	+ 54.6

$$\frac{-7f}{7} = \frac{54.6}{7}$$

$$f = 7.8$$

[К]

27.0 <i>d</i>	- 12.0 + 12.0	=	16.0 <i>d</i>		49.6 12.0
27.0 <i>d</i>	+ 12.0	_	16.0 <i>d</i>	+	61.6
– 16d		-	– <i>16d</i>	т	01.0

$$\frac{11d}{11} = \frac{61.6}{11}$$

 $d = 5.6$