{A} ALGEBRA: Linear equations with unknowns on both sides

Name:

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!

Date:

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[1] $20m + 2 = 23m - 46$

[2] $21m - 12 = 14m + 142$

[3] $38m + 1 = 44m - 203$

[4] $32m - 18 = 21m + 444$

Round your answers to the below equations to 1 d.p.

[5] $48.8m + 1 = 51.8m - 133.4$

[6] $20m - 8 = 12m + 391.2$

ANSWERS

Copy and complete each problem into your exercise book and solve for the variable.

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[1]

	20 *m*	+	2	=	23 *m*	−	46
			+ 46				*+ 46*
	20 *m*	+	48	=	23 *m*		
	− 20 m				*− 20 m*		

$$\frac{48}{3} = \frac{3m}{3}$$

16 = m

$$\boxed{\textbf{\textit{m} = 16}}$$

[2]

	21 *m*	−	12	=	14 *m*	+	142
			+ 12				*+ 12*
	21 *m*			=	14 *m*	+	154
	− 14m				*− 14m*		

$$\frac{7m}{7} = \frac{154}{7}$$

$$\boxed{\textbf{\textit{m} = 22}}$$

[3]

	38 *m*	+	1	=	44 *m*	−	203
			+ 203				*+ 203*
	38 *m*	+	204	=	44 *m*		
	− 38m				*− 38m*		

$$\frac{204}{6} = \frac{6m}{6}$$

34 = m

$$\boxed{\textbf{\textit{m} = 34}}$$

[4]

	32 *m*	−	18	=	21 *m*	+	444
			+ 18				*+ 18*
	32 *m*			=	21 *m*	+	462
	− 21m				*− 21m*		

$$\frac{11m}{11} = \frac{462}{11}$$

$$\boxed{\textbf{\textit{m} = 42}}$$

[5]

	48.8 *m*	+	1.0	=	51.8 *m*	−	133.4
			+ 133.4				*+ 133.4*
	48.8 *m*	+	134.4	=	51.8 *m*		
	− 48.8m				*− 48.8m*		

$$\frac{134.4}{3} = \frac{3m}{3}$$

44.8 = m

$$\boxed{\textbf{\textit{m} = 44.8}}$$

[6]

	20.0 *m*	−	8.0	=	12.0 *m*	+	391.2
			+ 8.0				*+ 8.0*
	20.0 *m*			=	12.0 *m*	+	399.2
	− 12m				*− 12m*		

$$\frac{8m}{8} = \frac{399.2}{8}$$

$$\boxed{\textbf{\textit{m} = 49.9}}$$