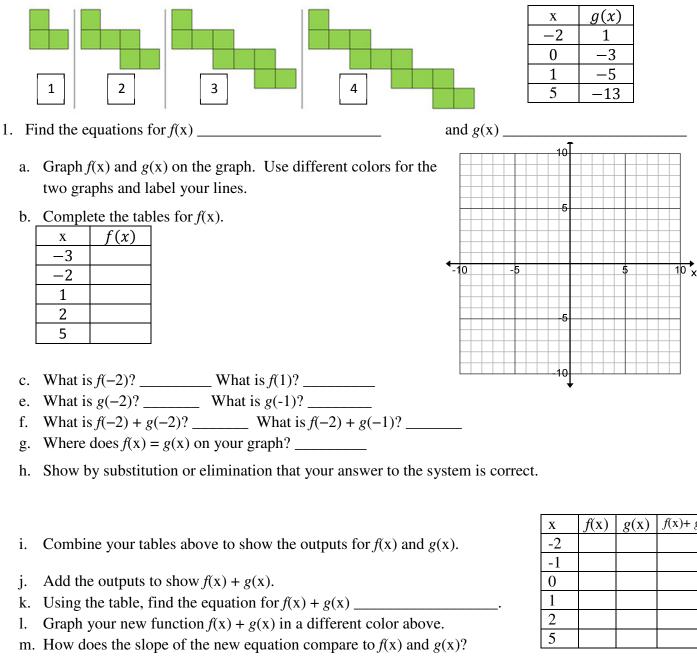
8A Adding & Subtracting Linear Functions

SHOW YOUR WORK AND WORK IN PENCIL

The following pattern represents f(x). The second table represents g(x).



- How does the y-intercept of the new equation compare to f(x) and g(x)? n.
- Write the equation for f(x) g(x) _____. 0.
- How does the slope of the new equation compare to f(x) and g(x)? p.
- How does the y-intercept of the new equation compare to f(x) and g(x)? q.
- Graph your new function f(x) g(x) in a different color above. r.
- Explain how you found your equation. s.

Х	$f(\mathbf{x})$	$g(\mathbf{x})$	$f(\mathbf{x}) + g(\mathbf{x})$
-2			
-1			
0			
1			
2			
5			

Per:

Name:

a. <i>f</i> (1) =		-	c. $f(1) + g($	1) =		e. $f(\mathbf{x})$	$\tau g(x)$		
b. g(1) =			d. <i>f</i> (1) – <i>g</i> (1 2 . SYW for each of the second s	.) =		f. <i>f</i> (x)	$-g(\mathbf{x})$	=	
							e. <i>f</i> (2) ·	(2)	_	
a. J	(2) =			c. $f(\mathbf{x}) + g(\mathbf{x})$	() =		e. f(2)	+ g(2)	=	
b. g(2) =		d.	$f(\mathbf{x}) - g(\mathbf{x})$	x) =		f. <i>f</i> (2)	-g(2)	=	
4. Us	e the no	n-linea	r data from t	he table to an	swer the que	stions.		F		T
a.Wł	nat is <i>a</i> (-	-3) + b((-3)?	e.	What is $a(-$	$(-1) + b(-1)^{2}$		_	<u>x</u>	a(x)
b.Wł	nat is <i>a</i> (()) + b(0))?	f. What	is $a(-1)b(-1)$	1)?			<u>-3</u> -1	1 7
c.Wł	nat is <i>a</i> (()) <i>b</i> (0)?		g. Find	where $a(\mathbf{x}) =$	1			0	-3
d.Wł	nat is <i>a</i> (7	(7) - b(7))?	h. Find	where $b(\mathbf{x}) =$	-5			2	8
) = 3x - 3x	,	,		~ /				7	3
			v	intoroant?		V interes	nt?			
a. Wł	iat is the	slope?	I	-intercept? _		_ A-merce	pr:			
b. Ho	w could	I chang	ge $h(x)$ to ma	ake each point	t on the line s	shift 5 units	lower?			
				ake each point ach point on tl						
? How	could I o	change	h(x) make ea		he line shift 3	3 units to th	e right? _			
? How Fill in	could I of the foll	change owing t	h(x) make eached by the set of	ach point on the new function	he line shift 3 ns. Count by	3 units to th	e right? _			
? How Fill in	could I of the foll $f(x)$	change owing t g(x)	h(x) make eached by the eached by $f(x) + g(x)$	ach point on the new function $f(x) - g(x)$	the line shift $\frac{2}{f(x)g(x)}$	3 units to th 7 1's on the	e right? _			
? How Fill in <u>x</u> _5	could I of the foll $f(x)$ 42	change owing t	h(x) make eached by the set of	ach point on the new function	he line shift 3 ns. Count by	3 units to the 71 's on the 50	e right? _			
? How Fill in x	could I of the foll $f(x)$	change owing t g(x) -12	h(x) make eached by the eached by $f(x) + g(x)$	ach point on the new function $f(x) - g(x) = 54$	the line shift $\frac{2}{f(x)g(x)}$	3 units to the 71 's on the 50 40 30 30	e right? _			
? How Fill in x -5 -3	could I of the foll $f(x)$ 42 30	change owing t g(x) -12 -4	h(x) make eached by the eached by $f(x) + g(x)$	ach point on the new function $f(x) - g(x) = 54$	the line shift $\frac{2}{f(x)g(x)}$	3 units to the 71 's on the 50	e right? _			
? How Fill in <u>x</u> -5 -3 -2 0 1	could I of the foll $f(x)$ f(x) 42 30 24	change owing t g(x) -12 -4 0 8 12	h(x) make eached by the eached by $f(x) + g(x)$	ach point on the new function $f(x) - g(x) = 54$	the line shift $\frac{2}{f(x)g(x)}$	3 units to the 71 's on the 50 40 30 30	e right? _			
? How Fill in $\begin{array}{r} x \\ -5 \\ -3 \\ -2 \\ 0 \\ 1 \\ 3 \end{array}$	could I of the foll $f(x)$ f(x) 42 30 24 12 6 -6	change owing t	h(x) make eace able for three $f(x) + g(x)30$	ach point on the new function $f(x) - g(x) = 54$	the line shift $\frac{2}{f(x)g(x)}$	3 units to th 7 1's on the 40 30 20	e right? _			
$\begin{array}{c} \text{How} \\ \text{Fill in} \\ \hline x \\ \hline -5 \\ \hline -3 \\ \hline -2 \\ 0 \\ \hline 1 \\ \hline 3 \\ \hline 5 \\ \end{array}$	could I d $f(x)$ 42 30 24 12 6 -6 -18	change owing t	h(x) make earline three for three $f(x) + g(x)3018$	ach point on the new function $f(x) - g(x)$ 54 34	he line shift 3 ns. Count by f(x)g(x) -504 -120	3 units to the 71 's on the 40 40 30 20 10 40 10 10 10 10 10 10 10 1	e right? _			
$\begin{array}{c} \text{How} \\ \text{Fill in} \\ \hline x \\ -5 \\ -3 \\ -2 \\ 0 \\ 1 \\ 3 \\ 5 \\ \end{array}$	could I d $f(x)$ 42 30 24 12 6 -6 -18	change owing t	h(x) make earline three for three $f(x) + g(x)3018$	ach point on the new function $f(x) - g(x) = 54$	he line shift 3 ns. Count by f(x)g(x) -504 -120	3 units to th 7 1's on the 40 30 20	e right? _			
? How Fill in	could I of the foll f(x) 42 30 24 12 6 -6 -18 mat is $f(1)$	change owing t g(x) -12 -4 0 8 12 20 28)?	h(x) make earline three for three $f(x) + g(x)301818Wh$	ach point on the new function $f(x) - g(x)$ 54 34	he line shift 3 ns. Count by f(x)g(x) -504 -120	3 units to the 71 's on the 40 40 30 20 10 40 10 10 10 10 10 10 10 1	e right? _			
Provide the second state of the second state	f(x) $f(x)$ 42 30 24 12 6 -6 -18 hat is $f(1)$ ad & grassing	change owing t g(x) -12 -4 0 8 12 20 28)? aph the	h(x) make earling table for three f(x) + g(x) 30 18 18 Wh equation for	ach point on the new function $f(x) - g(x)$ 54 34 hat is $f(3)$?	he line shift 3 ns. Count by f(x)g(x) -504 -120	3 units to the 71's on the 40 40 30 20 10 -10	e right? _			
? How Fill in x -5 -3 -2 0 1 3 5 a. W1 b.Fin c.Fa	could I of the foll f(x) 42 30 24 12 6 -6 -18 nat is $f(1$ nd & gratical set of the s	change owing t g(x) -12 -4 0 8 12 20 28)? aph the store store	h(x) make earling table for three f(x) + g(x) 30 18 18 Wh equation for pe of $f(x)$:	ach point on the new function $f(x) - g(x)$ f(x) - g(x) 54 34 a a $f(x): _$	he line shift 3 ns. Count by f(x)g(x) -504 -120	3 units to the 71's on the 40 40 30 20 10 -10 -20	e right? _			
? How Fill in x -5 -3 -2 0 1 3 5 a. Wh b.Fin c.Fa d.Wh	could I of the foll f(x) 42 30 24 12 6 -6 -18 nat is $f(1)$ ad & gra- ctor out nat is the	change owing t g(x) -12 -4 0 8 12 20 28)? aph the the slote e x-inter	h(x) make earling trable for three f(x) + g(x) 30 18 18 Where equation for preof $f(x)$: rcept of $f(x)$?	ach point on the new function $f(x) - g(x)$ f(x) - g(x) 54 34 ant is $f(3)$? f(x):	he line shift 3 ns. Count by f(x)g(x) -504 -120	3 units to the 71's on the 40 40 30 20 10 -10 -20 -30	e right? _			
? How Fill in x -5 -3 -2 0 1 3 5 a. Wh b.Fin c.Fac d.Wh e.Wh	could I of the foll f(x) 42 30 24 12 6 -6 -18 nat is $f(1)$ nd & gra- tor out nat is the nat is $g(1)$	change owing t g(x) -12 -4 0 8 12 20 28)? aph the s the slot e x-inter	h(x) make earling table for three f(x) + g(x) 30 18 18 Where equation for preof $f(x)$: rcept of $f(x)$?	ach point on the new function $f(x) - g(x)$ f(x) - g(x) 54 34 ant is $f(3)$? f(x):	he line shift 3 ns. Count by f(x)g(x) -504 -120 -120	3 units to the 71's on the 40 40 30 20 10 -10 -10 -20 -30 -40	e right? _			

i. Graph $f(\mathbf{x}) + g(\mathbf{x})$ on the coordinate grid in a different color.

j. Circle f(1), g(1), and f(1) + g(1) on the graph.

k.How could you find the y-intercept for $f(\mathbf{x}) - g(\mathbf{x})$ using only the graph?

l. How did you find your values for $f(\mathbf{x})g(\mathbf{x})$?