

### Changing the Subject of Formulae

Complete the table for each **Formula** and its corresponding **Inverse Formula**.

Formula	Input	Output	1 <sup>st</sup> Operation	2 <sup>nd</sup> Operation	Inverse Formula	Input	Output	1 <sup>st</sup> Operation	2 <sup>nd</sup> Operation
A $y = 2x + 3$	4		$\times 2$	$+ 3$	$x = \frac{y - 3}{2}$	15			
B $y = 4x - 5$	3					7		$+ 5$	
C	6		$\div 3$	$+ 7$		9			$\times 3$
D $y = \frac{x - 9}{2}$	21					5		$\times 2$	
E $y = \frac{2x}{5}$	10		$\times 2$			8			
F $y = x^2 + 4$	3		<i>Square</i>			13			
G		32		$\times 2$	$x = \sqrt{\frac{x}{2}}$	50			
H	6					36		<i>Square Root</i>	$\times 3$
I	20		$\times 5$			10		<i>Square</i>	
J $y = \frac{\sqrt{x}}{3}$	36				$x = (3y)^2$		36		

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A $y = 2x + 3$	4		$\times 2$	$+ 3$	$x = \frac{y - 3}{2}$	15			
B $y = 4x - 5$	3					7		$+ 5$	
C	6		$\div 3$	$+ 7$		9			$\times 3$
D $y = \frac{x - 9}{2}$	21					5		$\times 2$	
E $y = \frac{2x}{5}$	10		$\times 2$			8			
F $y = x^2 + 4$	3		<i>Square</i>			13			
G		32		$\times 2$	$x = \sqrt{\frac{x}{2}}$	50			
H	6					36		<i>Square Root</i>	$\times 3$
I	20		$\times 5$			10		<i>Square</i>	
J $y = \frac{\sqrt{x}}{3}$	36				$x = (3y)^2$		36		

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A	$y = 2x + 3$	4	11	$\times 2$	$+ 3$	$x = \frac{y - 3}{2}$	15	6	$- 3$	$\div 2$
B	$y = 4x - 5$	3	7	$\times 4$	$- 5$	$x = \frac{y + 5}{4}$	7	3	$+ 5$	$\div 4$
C	$y = \frac{x}{3} + 7$	6	9	$\div 3$	$+ 7$	$x = 3(y - 7)$	9	6	$- 7$	$\times 3$
D	$y = \frac{x - 9}{2}$	21	6	$- 9$	$\div 2$	$x = 2y + 9$	5	19	$\times 2$	$+ 9$
E	$y = \frac{2x}{5}$	10	4	$\times 2$	$\div 5$	$x = \frac{5y}{2}$	8	20	$\times 5$	$\div 2$
F	$y = x^2 + 4$	3	13	<i>Square</i>	$+ 4$	$x = \sqrt{x - 4}$	13	3	$- 4$	<i>Square Root</i>
G	$y = 2x^2$	4	32	<i>Square</i>	$\times 2$	$x = \sqrt{\frac{x}{2}}$	50	5	$\div 2$	<i>Square Root</i>
H	$y = \left(\frac{x}{3}\right)^2$	6	4	$\div 3$	<i>Square</i>	$x = 3\sqrt{y}$	36	18	<i>Square Root</i>	$\times 3$
I	$y = \sqrt{5x}$	20	10	$\times 5$	<i>Square Root</i>	$x = \frac{y^2}{5}$	10	20	<i>Square</i>	$\div 5$
J	$y = \frac{\sqrt{x}}{3}$	36	2	<i>Square Root</i>	$\div 3$	$x = 3y^2$	2	36	<i>Square</i>	$\times 3$

