

# TRANSLate... and Solve!

1		2	
"Twice a number plus 4 is 8"		"The product of 4 and a number plus 17 is 5."	
3		4	
"Twice a number minus 5 is 7"		"The quotient of a number and 6 minus 3 is 1"	
5		6	
"Two more than 4 times a number is -18"		"Seven less than twice a number is 5"	
7		8	
"Five less than the quotient of a number and 3 is -7"		"One subtracted from the product of 4 and a number is 11"	
9		10	
"The quotient of a number and -9, increased by 10 is 11"		"Half of a number decreased by 8 is -3"	

11	"The sum of three-fourths of a number and 1 is -5"	12	"Ten minus one-third of a number is 4"
13	"Four more than the quotient of a number and 3 is at least 9"	14	"Negative three times a number increased by seven is less than -11"
15	"Seven more than one-sixth of a number is greater than three"	16	"The sum of 5 and the twice a number is at most 27"
17	"Four less than two-fifths of a number is no less than 2"	18	"Three-fourths of a number decreased by 10 is greater than or equal 5"
19	"The quotient of a number and -5, increased by 7 is at minimum 1"	20	"One less than half a number is a maximum of 19"

good job!

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1	<p>"Twice a number plus 4 is 8"</p> $\begin{array}{r} 2n + 4 = 8 \\ -4 \quad -4 \\ \hline 2n = 4 \\ \frac{2n}{2} = \frac{4}{2} \\ n = 2 \end{array}$	2	<p>"The product of 4 and a number plus 17 is 5."</p> $\begin{array}{r} 4n + 17 = 5 \\ -17 \quad -17 \\ \hline 4n = -12 \\ \frac{4n}{4} = \frac{-12}{4} \\ n = -3 \end{array}$
3	<p>"Twice a number minus 5 is 7"</p> $\begin{array}{r} 2n - 5 = 7 \\ +5 \quad +5 \\ \hline 2n = 12 \\ \frac{2n}{2} = \frac{12}{2} \\ n = 6 \end{array}$	4	<p>"The quotient of a number and 6 minus 3 is 1"</p> $\begin{array}{r} \frac{n}{6} - 3 = 1 \\ +3 \quad +3 \\ \hline 6 \cdot \frac{n}{6} = 4 \cdot 6 \\ n = 24 \end{array}$
5	<p>"Two more than 4 times a number is -18"</p> $\begin{array}{r} 4n + 2 = -18 \\ -2 \quad -2 \\ \hline 4n = -20 \\ \frac{4n}{4} = \frac{-20}{4} \\ n = -5 \end{array}$	6	<p>"Seven less than twice a number is 5"</p> $\begin{array}{r} 2n - 7 = 5 \\ +7 \quad +7 \\ \hline 2n = 12 \\ \frac{2n}{2} = \frac{12}{2} \\ n = 6 \end{array}$
7	<p>"Five less than the quotient of a number and 3 is -7"</p> $\begin{array}{r} \frac{n}{3} - 5 = -7 \\ +5 \quad +5 \\ \hline 3 \cdot \frac{n}{3} = -2 \cdot 3 \\ n = -6 \end{array}$	8	<p>"One subtracted from the product of 4 and a number is 11"</p> $\begin{array}{r} 4n - 1 = 11 \\ +1 \quad +1 \\ \hline 4n = 12 \\ \frac{4n}{4} = \frac{12}{4} \\ n = 3 \end{array}$
9	<p>"The quotient of a number and -9, increased by 10 is 11"</p> $\begin{array}{r} \frac{n}{-9} + 10 = 11 \\ -10 \quad -10 \\ \hline \frac{n}{-9} = 1 \cdot -9 \\ n = -9 \end{array}$	10	<p>"Half of a number decreased by 8 is -3"</p> $\begin{array}{r} \frac{1}{2}n - 8 = -3 \\ +8 \quad +8 \\ \hline 2 \cdot \frac{1}{2}n = 5 \cdot 2 \\ n = 10 \end{array}$

11	<p>"The sum of three-fourths of a number and 1 is -5"</p> $\begin{array}{r} \frac{3}{4}n + 1 = -5 \\ -1 \quad -1 \\ \hline \frac{4}{3} \cdot \frac{3}{4}n = -6 \cdot \frac{4}{3} \\ n = -8 \end{array}$	12	<p>"Ten minus one-third of a number is 4"</p> $\begin{array}{r} 10 - \frac{1}{3}n = 4 \\ -10 \quad -10 \\ \hline -3 \cdot -\frac{1}{3}n = -6 \cdot -3 \\ n = 18 \end{array}$
13	<p>"Four more than the quotient of a number and 3 is at least 9"</p> $\begin{array}{r} 4 + \frac{n}{3} \geq 9 \\ -4 \quad -4 \\ \hline 3 \cdot \frac{n}{3} \geq 5 \cdot 3 \\ n \geq 15 \end{array}$	14	<p>"Negative three times a number increased by seven is less than -11"</p> $\begin{array}{r} -3n + 7 < -11 \\ -7 \quad -7 \\ \hline -3n < -18 \\ -3 \quad -3 \\ \hline n > 6 \end{array}$
15	<p>"Seven more than one-sixth of a number is greater than three"</p> $\begin{array}{r} 7 + \frac{1}{6}n > 3 \\ -7 \quad -7 \\ \hline 6 \cdot \frac{1}{6}n > -4 \cdot 6 \\ n > -24 \end{array}$	16	<p>"The sum of 5 and the twice a number is at most 27"</p> $\begin{array}{r} 5 + 2n \leq 27 \\ -5 \quad -5 \\ \hline 2n \leq 22 \\ \frac{2}{2} \quad \frac{2}{2} \\ \hline n \leq 11 \end{array}$
17	<p>"Four less than two-fifths of a number is no less than 2"</p> $\begin{array}{r} \frac{2}{5}n - 4 \geq 2 \\ +4 \quad +4 \\ \hline \frac{5}{2} \cdot \frac{2}{5}n \geq 6 \cdot \frac{5}{2} \\ n \geq 15 \end{array}$	18	<p>"Three-fourths of a number decreased by 10 is greater than or equal 5"</p> $\begin{array}{r} \frac{3}{4}n - 10 \geq 5 \\ +10 \quad +10 \\ \hline \frac{4}{3} \cdot \frac{3}{4}n \geq 15 \cdot \frac{4}{3} \\ n \geq 20 \end{array}$
19	<p>"The quotient of a number and -5, increased by 7 is at minimum 1"</p> $\begin{array}{r} \frac{n}{-5} + 7 \geq 1 \\ -7 \quad -7 \\ \hline -5 \cdot \frac{n}{-5} \geq -6 \cdot -5 \\ n \leq 30 \end{array}$	20	<p>"One less than half a number is a maximum of 19"</p> $\begin{array}{r} \frac{1}{2}n - 1 \leq 19 \\ +1 \quad +1 \\ \hline 2 \cdot \frac{1}{2}n \leq 20 \cdot 2 \\ n \leq 40 \end{array}$

good job!