

3.1: Practice Translate Problems

Fill in the table by following the model.

	Mathematical Phrase	Translation
	The sum of x and 5	$x + 5$
1.	Twice a number.	
2.	The total of 3 and a number.	
3.	One-half of a number added to 7.	
4.	The difference of a number and 8.	
5.	The product of 5 and x , less 4.	
6.	Two-thirds of the difference of 4 and x .	
7.	x less than 4.	
8.	The quotient of a number and 5.	
9.	x less 9.	
10.	The sum of the product of 8 and a number, and 3.	
11.	Twice the difference of 5 and a number.	
12.	The sum of the quotient of x and 3, and 5.	
13.	Three times the sum of x and the product of 5 and y .	
14.	The difference of the sum of 4 and y , and the quotient of 5 and x .	
15.	The square of the difference of the opposite of a number and 5.	
16.	The quotient of 4 and the sum of 5 and twice x .	
17.	8 decreased by the product of $3x$ and y .	
18.	The difference of twice x and 3, increased by -4 <u>is</u> 98.	
19.	The opposite of the absolute value of -32 <u>is equal to</u> 3 less than x .	
20.	Two-thirds of the product of 8 and x <u>is the same as</u> 12.	
21.	The cube of the difference of the opposite of x and 5.	
22.	The difference the cube of the opposite of x and 5.	
23.	The difference of the cubes of the opposite of x and 5.	
24.	One-half of x subtracted from twice y .	
25.	One-half of the difference of twice y and x .	

Solutions to Translate Problems

	Mathematical Phrase	Translation
	The sum of x and 5	$x + 5$
1.	Twice a number.	$2x$
2.	The total of 3 and a number.	$3 + x$ or $x + 3$
3.	One-half of a number added to 7.	$\frac{1}{2}x + 7$ or $\frac{x}{2} + 7$
4.	The difference of a number and 8.	$x - 8$
5.	The product of 5 and x , less 4.	$5x - 4$
6.	Two-thirds the difference of 4 and x .	$\frac{2}{3}(4 - x)$ or $\frac{2(4 - x)}{3}$
7.	x less than 4.	$4 - x$
8.	The quotient of a number and 5.	$x \div 5$ or $\frac{x}{5}$
9.	x less 9.	$x - 9$
10.	The sum of the product of 8 and a number, and 3.	$8x + 3$
11.	Twice the difference of 5 and a number.	$2(5 - x)$
12.	The sum of the quotient of x and 3, and 5.	$(x \div 3) + 5$ or $\frac{x}{3} + 5$
13.	Three times the sum of x and the product of 5 and y .	$3(x + 5y)$
14.	The difference of the sum of 4 and y , and the quotient of 5 and x .	$(4 + y) - (5 \div x)$ or $(4 + y) - \frac{5}{x}$
15.	The square of the difference of the opposite of a number and 5.	$(-x - 5)^2$
16.	The quotient of 4 and the sum of 5 and twice x .	$4 \div (5 + 2x)$ or $\frac{4}{5 + 2x}$
17.	8 decreased by the product of $3x$ and y .	$8 - [(3x)y]$ or $8 - 3xy$
18.	The difference of twice x and 3, increased by -4 is 98.	$(2x - 3) + (-4) = 98$
19.	The opposite of the absolute value of -32 is equal to 3 less than x .	$- -32 = x - 3$ or $x - 3 = - -32 $
20.	Two-thirds of the product of 8 and x is the same as 12.	$\frac{2}{3}(8x) = 12$
21.	The cube of the difference of the opposite of x and 5.	$(-x - 5)^3$
22.	The difference the cube of the opposite of x and 5.	$(-x)^3 - 5$
23.	The difference of the cubes of the opposite of x and 5.	$(-x)^3 - 5^3$
24.	One-half of x subtracted from twice y .	$2y - \frac{1}{2}x$ or $2y - \frac{x}{2}$
25.	One-half of the difference of twice y and x .	$\frac{1}{2}(2y - x)$ or $\frac{2y - x}{2}$