

**Starter**

5 SEP 2018

1. Name the all the number sets to which -3 belongs.  $\mathbb{R}, \mathbb{Q}, \mathbb{Z}$

2. simplify:  $4 - 2(2 - 4)^2 - 3 - (-2)$

$$\begin{aligned}
 &4 - 2(-2)^2 - 3 - (-2) \\
 &4 - 2(4) - 3 - (-2) \\
 &4 - 8 - 3 - (-2) \\
 &-4 - 3 - (-2) \\
 &\quad -7 - (-2) \\
 &\quad \quad -7 + 2 \\
 &\quad \quad \quad \boxed{-5}
 \end{aligned}$$

**Using Variables**

⊙ A **variable** is a symbol, usually a letter, that represents any of the members of a specified set.

⊙ An **algebraic expression** is a mathematical phrase that can include numbers, variables, and operation symbols.

Coefficient  $\rightarrow 4x^3$  ← exponent  
variable

**Using Variables**

⊙ **Writing an Algebraic Expression**

> Two times a number plus 5

$$2n + 5$$

> 7 less than three times a number

$$3n - 7$$

sum — add  
difference — subtract  
product — multiply  
Quotient — divide  
5 (sum)

Practice Translating Verbal Expressions **Took up in class**

Translate the verbal expression or equation into an algebraic expression or equation.

1. five more than a number  $x+5$   
 2. six less than a number  $x-6$   
 3. five more than twice a number  $2x+5$   
 4. six less than nine times a number  $9x-6$   
 5. four times a number  $4x$   
 6. the sum of eight and a number  $8+x$   
 7. the sum of a number and eight  $x+8$   
 8. the difference of a number and five  $x-5$   
 9. the difference of five and a number  $5-x$   
 10. five times the sum of a number and three  $5(x+3)$   
 11. seven times the difference of five and a number  $7(5-x)$   
 12. the product of a number and six  $6x$   
 13. the product of six and a number  $6x$   
 14. the quotient of a number and three  $x/3$   
 15. the quotient of three and a number  $3/x$   
 16. the sum of three and a number, divided by two  $(x+3)/2$

Handwritten answers below the list:

①  $x+5$     ②  $x-6$     ③  $2x+5$   
 ④  $9x-6$     ⑤  $4x$     ⑥  $8+x$   
 ⑦  $x+8$     ⑩  $5(x+3)$

Turn in the half-sheet then work on the facing math lesson # 1