

Evaluate the following expressions. Recall that the division operator means integer division (truncate) between two integers and regular division otherwise. Also recall that the mod operator (%) means find the remainder (we will only use it between two integers) and that it has the same order of precedence as multiply and divide.

1) $6 / 3 * 2$

2) $4 + 3 * 5$

3) $7 - 2 * 5 + 3$

4) $((4 + 9) * (2 + 3) * 2) + 1$

5) $12 - 6 / 3 + 3$

6) $(3 + 4) - 5 - 1$

7) $4 + 2 * 3 - 1$

8) $2 + 3 * 2 + 15 / 5$

9) $12 + 3 / 4 + 1$

10) $12 \% 5$

11) $16 \% 3$

12) $14 \% 2$

13) $2 + 4 \% 5$

Convert each of the following mathematical expressions to a Java arithmetical expression. Use parenthesis only where needed. Note: All variables below are int data types unless declared otherwise.

13) $\text{int } x = y \div z$

14) $\text{int } x = 2a - b$

15) $\text{int } x = (m + n)(p + q) / 2$

16) $\text{double } x = \frac{a + b}{r - s}$

You can use the mod operator to find out a lot of information about a number. Answer the following questions about the meaning of the **result** variable.

17) $\text{int } \text{result} = (n \% 2);$

What does it mean about n if **result** has the value of 1? When will **result** be 0?

18) $\text{int } \text{result} = (n \% 10);$

What is the biggest number **result** can be? What is **result** if n is 198675?