

ARCHIMEDEAN MIDDLE CONSERVATORY

Classwork Assignment

Evaluate the expression.

1. $18 - (-3)^2$

2. $8 + 4^2$

3. $-16 - (-3)^3$

4. $9 + 5^2 \cdot (-4)$

5. $4|-5 - 6| + 9$

6. $6(8 - (-5)) + 4$

7. $22 - 3|4 - 6|$

8. $(-25 - 7) \div 2 + 6$

9. $-3(-6 + 2)^2 + 8$

10. $-8(5) - \frac{6 + 4^2}{-2}$

11. $8^2 - 3(9 - 4)^2 \div 15$

12. $\frac{|-7 - 9|}{4} - 3(8 - 5)^3$

13. Your friend evaluates the expression.
Is your friend correct? Explain your reasoning.

$$\begin{aligned} -(-4)^2 - 3 \cdot 4 &= -16 - 3 \cdot 4 \\ &= -19 \cdot 4 \\ &= -76 \end{aligned}$$

Determine whether the two expressions are equivalent.

14. $3^2 - (-8)$
 $9 - 4 \cdot 2$

15. $(-9)^2 - 8$
 $(-27)(-3) - 2^3$

16. $24 - 2|7 - 4|$
 $-6(-2)^2 + 6$

17. $-(-4)^2 + 2(6 - 10)$
 $-2(2)^3 + 8$

18. $\frac{|6 - 15|}{3} + 4(3)$
 $|-3^2| - (-6)$

19. $0(3 - 4) + |(-3)^3|$
 $- [2(8 - 12)] + 2(-7)$

20. $32 - (-6 + 10)^2$
 $(2 - 3)^2 - (-3 \cdot 5)$

21. $\frac{4 \cdot 8}{-2} + (4 + 5)^2$
 $-(-4^2) + 7^2$

22. $-|4 \cdot 3 - 8| \div 2$
 $(-4)^2 - 16 \div 2(-2)$

23. An online trivia quiz awards five points for each correct answer and deducts two points for each incorrect answer. There is no penalty for skipping a question.
- What is the difference between the highest and lowest scores you can earn for a 10-question quiz?
 - You answer six questions correctly and four questions incorrectly. You also answer a bonus question that doubles the points for correct answers. What is your final score for the quiz?
24. Your virtual pet gains a level for every 150 battles it wins in a video game. It starts at level 0 with 0 wins. How many more battles does it need to win to advance to the next level if it has won 587 battles? Justify your answer.
25. Your friend secretly chooses a number. He says that when you multiply the number by 2, subtract 14, and then divide by 6, the result is -5 . What number did your friend choose? Justify your answer.