

Evaluate each expression for $a = 2$, $b = 3$, and $c = 6$.

1. $c - a$

2. ab

3. $c \div a$

4. $\frac{c}{b}$

5. $b - a$

6. Write two verbal expressions for $n - 5$.

7. Nate runs 8 miles each week. Write an expression for the number of miles he runs in n weeks. Find the number of miles Nate runs in 5 weeks.

Add or subtract.

8. $-5 + 8$

9. $-3 - 4$

10. $4 + (-7)$

11. $7 - x$ for $x = -2$

The table shows the lowest temperatures recorded in four states.

12. What is the difference between the lowest temperatures in Alaska and Hawaii?

13. What is the difference between the lowest temperatures in Nebraska and Texas?

Lowest Temperatures in Four States	
Location	Temperature ($^{\circ}\text{F}$)
Prospect Creek, Alaska	-80
Camp Clarke, Nebraska	-47
Mauna Kea, Hawaii	12
Seminole, Texas	-23

Multiply or divide if possible.

14. $(-3)(-6)$

15. $-\frac{1}{2} \div \frac{1}{4}$

16. $12 \div (-3)$

17. $x \div -4$ for $x = 0$

Simplify each expression.

18. 5^4

19. $\left(-\frac{4}{5}\right)^3$

20. 2^5

21. -6^2

Classify each real number. Write all classifications that apply.

22. 30

23. $\sqrt{6}$

24. -12

25. $\frac{1}{2}$

Evaluate each expression for the given value of x .

26. $\frac{-2-6}{x^2}$ for $x = 2$

27. $8(x-1)^2$ for $x = 11$

28. $22 + [-2(19-x)]$ for $x = 7$

29. Does the phrase "2 times the sum of a number and 5" represent the same expression as the phrase "the sum of 2 times a number and 5"? Explain why or why not.

Simplify each expression.

30. $5\frac{1}{4} + 7 + 2\frac{3}{4}$

31. $-2(x+5) + 4x$

32. $3x + 2x^2 - x$

Graph each point.

33. $W(1, -3)$

34. $X(-3, 0)$

35. $Y(5, 3)$

36. $Z(0, -2)$

37. Generate ordered pairs for $y = 2x - 1$ for $x = -2, -1, 0, 1, 2$. Graph the ordered pairs and describe the pattern.

COLLEGE ENTRANCE EXAM PRACTICE



FOCUS ON SAT

The SAT is a 3-hour test that is often used to predict academic success at the college level. SAT scores are used to compare the math and verbal reasoning skills of students from all over the world.

You may want to time yourself as you take this practice test. It should take you about 8 minutes to complete.



In each section of SAT questions, the easier questions are at the beginning of the section and harder questions come later. Answer as many of the easy questions as you can first, and then move on to the more challenging questions.

- The number 0 is NOT an example of which of the following?
 - Real numbers
 - Rational numbers
 - Whole numbers
 - Integers
 - Natural numbers
- A clothing store opens with 75 pairs of jeans on a sale table. By noon, 10 pairs have been sold. As of 2:00, another 8 pairs have been sold. A clerk then restocks with 12 pairs. Receipts show that 18 pairs of jeans were sold after 2:00. How many pairs of jeans are left at the end of the day?
 - 51
 - 27
 - 123
 - 36
 - 23
- If Jack is three times as old as his sister Judy, which of the following expressions represents Jack's age if Judy is j years old?
 - $3j > j$
 - $3j$
 - $j + 3$
 - $3 - j$
 - $\frac{1}{3}j$
- Which of the following is equal to -3^4 ?
 - 64
 - 12
 - 12
 - 81
 - 81
- What is the result after applying the following sequence of operations to a number n in the given order?
 1. Subtract 2.
 2. Divide by 3.
 3. Add 7.
 4. Multiply by -1 .
 - $\frac{n-2}{3} + 7(-1)$
 - $\frac{(-n-2)+7}{3}$
 - $-(-\frac{2}{3} + 7)n$
 - $-\left(\frac{n-2}{3} + 7\right)$
 - $n - \frac{2}{3} + 7(-1)$
- Which property is illustrated by the equation $8(7) + 8(6) = 8(7 + 6)$?
 - Distributive Property
 - Associative Property of Multiplication
 - Commutative Property of Addition
 - Commutative Property of Multiplication
 - Associative Property of Addition