

N3CS19

Practice Set 31

Instructions: Answer each question on loose leaf, quad-ruled (graph paper), headed properly and written in lead-graphite. Remember to fold paper along the center, work exercises in order top to bottom, left column then right column. Staple multiple pages

- 1) The sum of 3 consecutive integers is 54; determine the integers
- 2) The sum of 3 consecutive even integers is 54; determine the integers
- 3) The sum of 3 consecutive odd integers is 57; determine the integers
- 4) #PushTheEnvelope: The sum of 3 consecutive integers is 13 less than four times the smallest; what are the integers?
- 5) The perimeter of a rectangle is 56 cm and its length is 8cm more than the width. Find the length and the width.
- 6) Imani swims the four times a week at her club's pool. She swims the same number of laps on Monday, Wednesday, and Friday, and 15 laps on Saturday. She swims a total of 51 laps each week. How many laps does Imani swim on Monday?



7) Solve for the unknown: $b - (5 - 3b) + (b - 1) = -6$
 $b =$

8) #PushTheEnvelope: Solve for the unknown: $\frac{3x + 2}{4} = -7$

9) Solve for the unknown: $-5 + 2(x + 4) = 3 + 2x$

10) Solve for the unknown: $3x - \frac{1}{4}(20 - 24x) - 5 = -6$

11) $x =$
 $5 - 4(3 - 2x) = 6 + 7(8 - 9x)$
 $x =$

12) #PushTheEnvelope: $\frac{3}{8} + \frac{5}{6} =$; show your solution as an improper fraction, mixed number, and decimal rounded to the nearest 10th.

13) Simplify; keep exponents positive: $\frac{n^{-8}}{n^5}$ 14) Simplify; keep exponents positive: $\frac{(3x^{-2})^3}{18x^3}$

15) Write as the product of its simplest rational and irrational factors: $\sqrt{56}$

16) $b^2 = 5$
 $b =$ 17) The area of a square is $361cm^2$; determine its perimeter.

18) The volume of a cube is $343mm^3$; determine the surface area of the cube.

19) Write as a fraction: $0.6\bar{3}$ 20) $(9 \cdot 10^4) \cdot (1.2 \cdot 10^5) =$ 21) $\frac{1.2 \cdot 10^6}{9.6 \cdot 10^{-3}} =$

22) The expression $23 - \sqrt{20}$ is between which two integers on a number line?

23) Solve the formula $y = mx + b$ for 'm'.

24) Find three consecutive even integers such that the sum of the smallest and largest is 36.

25) Mel is 3 years older than Rahfat and Aurelio is twice as old as Mel. The sum of their ages is 57. How old is Mel?

26) Grandpa Dexter is 75 years old. This is 9 years less than seven times the age of Junior Anthony. How old is Anthony?

27) The New England Patriots have been to 9 Super Bowls, which is 3 more than twice the number the Rams have been to. Translate that relationship into an algebraic equation.

28) In the expression $\frac{1}{x}$, what does the value do as 'x' gets smaller and smaller? Justify with evidence.

29) Mr. Ford spent \$5 on PopTarts in the CCCS vending machines; how many PopTarts did he buy?



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30) Write an expression for the sum of 3 consecutive integers, 4 consecutive integers, and 5 consecutive integers. What is the relationship between the constant (number) in the expression, and the number of consecutive integers? Justify with evidence.