

Chapter 1
Form B

For problems 1 – 8, perform the indicated operation or operations.

1. $(-2 - 3) + (-4 - (-2))$ 1. _____

2. $-\frac{3}{4} + \frac{3}{5}$ 2. _____

3. $-8 + 8 \div 4$ 3. _____

4. $\left(-\frac{6}{7}\right) \div \left(\frac{7}{8}\right)$ 4. _____

5. $-3 - 2(5^2 - 6^2)$ 5. _____

6. -3^2 6. _____

7. $(5 - 2)^3(4 - 6)^2$ 7. _____

8. $\frac{-4(12 - 2^4)}{(-1 + 2)(3 + 1)}$ 8. _____

For problems 9 – 10, simplify each algebraic expression.

9. $7(2x - 1) - (4x - 6)$ 9. _____

10. $-2[5a - 3(a + 1)]$ 10. _____

11. List all the irrational numbers in this set:
 $\left\{-\sqrt{29}, -4, -\frac{2}{3}, 0, 1.46, \pi\right\}$ 11. _____

Name _____

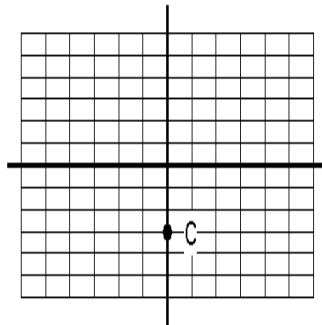
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12. Give an example of a number that is a rational number but not an integer. 12. _____

13. Insert either $<$ or $>$ in the boxed area to make a true statement:
 $-5 \square -2$ 13. _____

14. Find the absolute value: $\left| -\frac{2}{3} \right|$ 14. _____

For problems 15 – 16, plot and label the given point in the rectangular coordinate system below. Indicate in which quadrant each point lies.



15. $(4, -3)$ 15. _____

16. $\left(-3, \frac{4}{5}\right)$ 16. _____

17. Find the coordinates of point C on the above graph. 17. _____

For problems 18 – 19, evaluate each algebraic expression for the given value of the variable.

18. $2(-x + 5)$; $x = -3$ 18. _____

19. $x - x^2$; $x = -1$ 19. _____

20. Use the distributive property to rewrite without parentheses:
 $-7(4x - 8y - 1)$ 20. _____

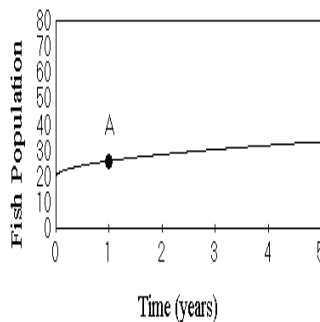
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21. Use the associative property of multiplication to write an equivalent algebraic expression. Then simplify the expression. $5(3x)$ 21. _____

22. The formula used to calculate the percentage of body fat for men is $\% \text{ Body fat} = \frac{-98.42 + 4.15w - 0.082b}{b}$ where w is the waist measurement in inches and b is the total body weight in pounds. What is the percentage of body fat for a man weighing 175 pounds and a waist measurement of 38 inches? Round the percentage to the nearest integer. 22. _____

For problems 23 – 24, the graph below represents the introduction of an endangered bird species into a wildlife refuge. The population of the bird species is monitored and recorded each year.



23. How many of the endangered birds were introduced into the wildlife refuge? 23. _____

24. Find the approximate coordinates of point A and interpret the coordinates in terms of the information given. 24. _____

25. What is the difference in elevation between a mountain climber 5186 feet above sea level and a scuba diver 25 feet below sea level? 25. _____