

Algebra Unit 1 Test Review

Listed below in bolded font is all topics on the test and at least one example for each topic.

Simplifying Radicals

1. $\sqrt{50}$

2. $3\sqrt{20}$

3. $2\sqrt{196}$

4. $\sqrt{108}$

5. $-7\sqrt{54x^{11}}$

6. $6\sqrt[3]{75mp^2q^3}$

Adding and Subtracting Radical

7. $7\sqrt{5} - 4\sqrt{5}$

8. $7\sqrt{20} + \sqrt{5}$

9. $\sqrt{54} + 2\sqrt{27} - 5\sqrt{18}$

10. $-3\sqrt{45} + 2\sqrt{12} + 3\sqrt{6} - 2\sqrt{20}$

Multiplying Radicals

11. $\sqrt{5} \cdot \sqrt{2}$

12. $3\sqrt{10} \cdot 4\sqrt{2}$

13. $(3\sqrt{8})^2$

14. $\sqrt{5}(3\sqrt{5} - 4\sqrt{3})$

Rational vs. Irrational

15. Circle all rational number: $\sqrt{16}$, $\sqrt{12}$, 4.2, $4.\overline{33}$, 4.257..., π , $\frac{1}{2}$, 6

16. Determine if the statement is always, sometimes, or never true.

a.) The sum of two rational numbers is always rational.

b.) The product of two irrational numbers is always rational.

c.) The product of a rational and irrational number is rational.

Dimensional Analysis

17. Convert 2 miles to inches

18. Convert 1,000 feet, to miles

Appropriate Units

19. What is best unit to measure the area of the classroom? (multiple choice)

a. cubic inches

b. cubic feet

c. square inches

d. square feet

Accuracy vs. Precision

20. Circle the most precise measurement: A. 3.2 feet or 30 inches

B. 16.01 miles or 16.2 miles

21. Circle the most accurate scale if weighing a 5 pound weight:

Scale 1= 4.85 pounds

Scale 2= 5.1 pounds

Interpreting Expressions (verbally and algebraically)

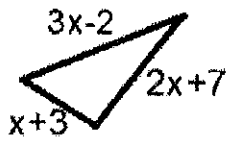
22. Write the algebraic expression: A: nine from a number=

B: 4 times the sum of a number and 2=

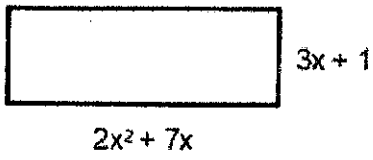
23. Write the verbal expression: A: $6 + x^2 =$

B: $5(4 - x) =$

12. Find the perimeter of the triangle.



14. Find the area of the rectangle.



15. F