SAMPLE PROVINCIAL ACHIEVEMENT TEST 2 PART A (NO CALCULATOR)

Use the following information to answer the next question.

$\sqrt{80}\ \sqrt{95}\ \sqrt{91}\ \sqrt{83}\ \sqrt{101}\ \sqrt{105}\ \sqrt{89}\ \sqrt{92}$

1. How many of the given square roots have a value between 9 and 10?

Answer: _____

(Record your answer on the answer sheet.)

Use the following information to answer the next question.

When simplified, $5^{13} \div 5^{8}$ can be written in the form a^b.

2. What is the value of $a + b$?

Answer: $a + b =$ _____

(Record your answer as an **integer** value on the answer sheet.)

3. What is the value of $(-9)^2 + (-2)^3$?

Answer: _____

(Record your answer as an **integer** value on the answer sheet.)

Use the following information to answer the next question.

Equation 1 $6^0 + 7^0 + 9^0 = 3$

Equation 2 $(2^5 \times 2^7)^3 = 2^{36}$

Equation 3 $2^6 - 2^3 = 2^3$

Equation 4 $\dfrac{2^0 \times 2^2}{2} = 2$

4. Which of the equations are **true**? Write the equation numbers in numerical order.

Answer: _____

(Record your answer on the answer sheet.)

5. What is the value of x in the equation $0.4 = \sqrt{x}$?

Answer: $x =$ _____

(Record your answer on the answer sheet.)

6. What is the value of $\dfrac{3}{4} \div \dfrac{5}{6}$ expressed as a fraction in simplest form?

Answer: $\dfrac{\square}{\square}$ (Record the **numerator** in the first column) (Record the **fraction bar** in the second column) (Record the **denominator** in the third column)

(Record your answer on the answer sheet.)

7. Order the following rational numbers from **smallest** value to **greatest** value, using the numbers **1**, **2**, **3** and **4**.

Use the number **1** to represent the **smallest** value and the number **4** to represent the **greatest** value.

Answer: _____ _____ _____ _____

$\dfrac{32}{40}$ $\dfrac{1}{5}$ $\dfrac{4}{10}$ $\dfrac{21}{35}$

(Record all **four digits** of your answer on the answer sheet.)

8. What is the value of $0.5 \times 0.5 + 2.7 \div 0.9$?

Express your answer to the nearest hundredth.

Answer: _____

(Record your answer on the answer sheet.)

9. What is the value of the expression $34 - 7(4 - 2)^2$?

Answer: _____

(Record your answer as an **integer** value on the answer sheet.)

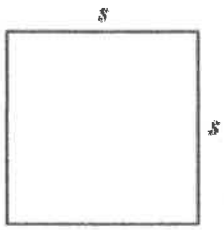
10. What is $4^2 + 5 \times 4 - 11$?

Answer: _____

(Record your answer as an **integer** value on the answer sheet.)

Use the following information to answer the next question.

Alberto's living room has a square shape. He measured the length of one wall to be 4.3 m.



11. What is the area of Alberto's living room expressed to the nearest tenth?

Answer: _____ m^2

(Record your answer on the answer sheet.)

12. What is the approximate square root of $\sqrt{\frac{143}{9}}$ to the nearest whole number?

Answer: _____

(Record your answer on the answer sheet.)

13. What is the value of $\sqrt{\frac{25}{9}} \times 1\frac{1}{2}$ to the nearest tenth?

Answer: _____

(Record your answer on the answer sheet.)

14. Solve for x in the following equation.
$-3(x + 10) = 2(x - 20)$

Answer: _____

(Record your answer as an **integer** value on the answer sheet.)

15. Solve for x in the following equation.

$\frac{x}{4} + 3 = 12$

Answer: $x =$ _____

(Record your answer as an **integer** value on the answer sheet.)

16. Solve for x in the following equation.
$6(2x + 1) = (2x + 3)$

Express your answer to the nearest tenth.

Answer: $x =$ _____

(Record your answer on the answer sheet.)

17. Solve for y in the following equation.
$4y - 22 = 42$

Answer: $y =$ _____

(Record your answer as an **integer** value on the answer sheet.)

Use the following information to answer the next question.

The following number line shows the solution set for $4x + 6 > 3x + 5$.

18. How many whole numbers on the given solution set will satisfy the inequality?

Answer: _____

(Record your answer on the answer sheet.)

19. When $x = 2$, what is the value of $(6x - 5) - (2x^2 + 3)$?

Answer: $x =$ _____

(Record your answer as an **integer** value on the answer sheet.)