Name:_____

School:_____

Pre-Algebra 2018

St. Paul's Tournament

1. Solve: $-8 + 2 + (-13) + 5 \times 4 - (-7)$

2. What percent of 400 is 80?

3. Evaluate: $\frac{2}{5}x^2$ if $x = 5$

4. Solve the inequality: $-6d - 3 \leq -6d - 15$

5. What is the slope of a line perpendicular to the line whose equation is $3x - 4y = 9$?

6. Christian needs an average of 94 to get an A in his class. What does he need to make on the next test to score an A if his first three test scores are 95, 94, and 90?

7. Simplify (give an exact answer): $\sqrt{45}$

8. Evaluate: $(4 + m^4) - m$ for $m = -4$

9. Find how far apart Albany and Rochester are in kilometers if their corresponding points on a map are 15 centimeters apart. Use 1 centimeter = 30 kilometers.

10. Simplify: $\dfrac{m^2 p^2 m^3 p^3 p}{m^4 p^2}$

11. Find the slope of a line that passes through the points (2,-3) and (-5, -5)

12. The ratio of girls to boys was 5 to 2. If 2100 were girls, how many were there in all?

13. If $5x - 8 = 17$, then what is the value of $2x + 16$?

14. What is the GCF of $14x^4y^3$ and $49y^2$?

15. If Patrick rolls two standard six-sided dice, what is the probability he obtains a sum of 7?

16. Simplify $\dfrac{8a^{24}}{4a^3}$

17. Solve: $(12 + 4 - 12 \div 4 \times 4 + 6 - 7[56 \div (7 \times 8)])^2$

18. Solve the inequality: $9(\frac{x}{3} - 4) > 2x + 13$

19. Charles earns 8% commission on all his sales. If he sells a total of $734.25, what commission does he receive?

20. Simplify: $|3 - 6| - |-3 \cdot 4|$

21. Simplify: $[3(p \div 3) - 2] - [5(p - 3) + 5]$

22. Solve: $x - 4 = 5(x - 16)$

23. What is 83,500 in scientific notation?

24. Three times the sum of a number and 3 is 3 less than the number. What is the number?

25. Solve for x: $6(x - 1.9) = 9$

Answers

1. 8
2. 20%
3. 10
4. no real solutions
5. $-\frac{4}{3}$
6. 97
7. $3\sqrt{5}$
8. 264
9. 450 km
10. mp^4
11. $\frac{2}{7}$
12. $2,940$
13. 26
14. $7y^2$
15. $\frac{1}{6}$
16. $2a^{21}$
17. 9
18. $x > 49$
19. $58.74
20. -9
21. $-4p + 8$
22. 19
23. 8.35×10^4
24. -6
25. 3.4