

Name: _____

School: _____

1. _____ Evaluate $\frac{9}{5} - \frac{8}{4}$.
2. _____ Find the sum of all integers between 10 and 100, inclusive.
3. _____ Evaluate 37×65 .
4. _____ How many positive integral factors does 168 have?
5. _____ Which of these is greater, $\frac{20}{29}$ or $\frac{7}{10}$?
6. _____ Find $12345 - 6789$.
7. _____ Find the area of a triangle with side lengths 4, 6 and 8.
8. _____ Find the positive difference between the roots of $y = x^2 - 12x - 28$.
9. _____ If 5 coins are flipped, find the probability that 2 land on tails.
10. _____ What is the volume of a sphere with radius 8?
11. _____ Find x : $\frac{1}{4}\text{mile} - 300\text{yards} + 97\text{feet} = x\text{feet}$.
12. _____ Evaluate $\sqrt{28^2 + 45^2}$.
13. _____ What is the area of an octagon with side length $\frac{\sqrt{2}}{2}$?
14. _____ Find x such that 1 is 10% of 20% of 50% of 80% of x .
15. _____ Given that $a + b = 13$, $b + c = 21$, and $a + c = 18$, find $a + b + c$.
16. _____ If this test has 40 questions and takes 8 minutes, and you spend equal time on each question, how long should the first 16 questions take, in seconds?
17. _____ Find $1 + 23 + 456$.
18. _____ Find the surface area of a cube with side length 8.
19. _____ Evaluate $\frac{1}{5} \times \frac{2}{6} \times \frac{3}{7}$
20. _____ Express 1.571428571428...as a fraction.
21. _____ How many permutations exist of "HAHAHA"?
22. _____ Evaluate $26 - 25 + 24 - \dots + 2 - 1$.
23. _____ Find the measure of an interior angle of a regular 15-gon.
24. _____ What is the harmonic mean of 20 and 60?
25. _____ Find the x -intercept of $y = \frac{2}{3}x + \frac{3}{5}$.
26. _____ Find the sum of the two smallest integers with 4 integral factors.
27. _____ Solve for positive x : $(\sqrt[3]{x^4})^{\frac{1}{2}} = 49$
28. _____ Find the volume of a cone with radius 6 and slant height 10.
29. _____ Find all y -intercepts: $(x - 2)^2 + (y - 3)^2 = 25$.
30. _____ If $a + b = 7$ and $a^2 + b^2 = 41$, find the product ab .

31. I can buy 7 pencils with \$1 but not 8. Find the lowest possible price of a pencil.
32. Find x such that $3x - 4 = 8 - x$.
33. Evaluate $\log_3 \frac{1}{e} \times \ln 8 \times \log_2 9$.
34. Solve and express in interval notation: $|(x^2 - 4x + 7)| \leq 12$.
35. Evaluate 89×111
36. Ran can buy erasers in packs of either 5 or 7. What is the greatest number of erasers Ran could not buy?
37. Aaron can paint a house in 8 hours, while Bbron can paint a house in 5 hours. How many hours would they take to paint a house together?
38. Find the infinite sum: $\frac{3}{2} + 1 + \frac{2}{3} + \frac{4}{9} + \dots$
39. Find $2^5 5^3$.
40. What is the fewest number of coins needed to give \$0.89?