

TPS Algebra Placement Exam

Please have your son or daughter answer the following questions. They should take this test **on their own** without the help of a calculator, book, notes, or other people. Please note the number of questions they answer correctly out of 20.

- _____ 1. Nine thousandths is _____? ____.
- a. .009 b. .0009 c. 9000.0 d. 9000
- _____ 2. Which of the following is not equal to the other three?
- a. $\frac{7}{3}$ b. $\frac{21}{9}$ c. 2.3 d. $2.333\bar{3}$
- _____ 3. $10^{-5} =$ ____? ____
- a. -.5 b. -100,000 c. .000001 d. .00001
- _____ 4. According to the 1990 census, about 0.54% of the US population 5 years or older speak Chinese at home. If, in 1990, the total US population 5 years or older was about 230.5 million, approximately how many Americans spoke Chinese at home?
- a. 12,447 b. 124,470 c. 1,244,700 d. 12,447,000
- _____ 5. Which equation illustrates the Commutative Property of Addition?
- a. $(3 + 2) + 1 = 5 + 1$ b. $3 + 2 = 2 + 3$
c. $(3 + 2) + 1 = 3 + (2 + 1)$ d. $3(2 + 1) = 6 + 3$
- _____ 6. Which is a solution to $(x + 3)(x - 2) = x^2$
- a. 3 b. 4 c. 6 d. 5
- _____ 7. Which equals $-2 - (-8)$?
- a. $-8 - (-2)$ b. $2 + 8$ c. $-2 + 8$ d. $-2 + -8$
- _____ 8. The ordered pair $(7, -2)$ would be graphed in which quadrant?
- a. I b. II c. III d. IV
- _____ 9. Which of the following is an irrational number?
- a. $\sqrt{3}$ b. $\overline{.33}$ c. $\sqrt{9}$ d. $\frac{2}{5}$
- _____ 10. Simplify $8 - (2)(-6) + (-4)$
- a. -4 b. -16 c. -8 d. 16

- _____ 11. Solve: $\frac{3}{4}x = 9$
a. 12 b. 27/4 c. 33/4 d. 27
- _____ 12. Solve: $15x + 2 = 12$
a. 10 b. 2/3 c. 3/2 d. 14/15
- _____ 13. Simplify: $\frac{2(3)^2}{6 - (-4)}$
a. 18/5 b. 9/5 c. 18 d. 9
- _____ 14. Evaluate $-3x + y$ when $x = 4$ and $y = -5$.
a. -17 b. 17 c. -7 d. 7
- _____ 15. Write an equivalent fraction to $\frac{9}{15}$ with a denominator of 20.
a. $\frac{9}{20}$ b. $\frac{14}{20}$ c. $\frac{13}{20}$ d. $\frac{12}{20}$
- _____ 16. Simplify completely: $\frac{840}{2160}$
a. $\frac{84}{216}$ b. $\frac{21}{54}$ c. $\frac{1}{4}$ d. $\frac{7}{18}$
- _____ 17. Simplify: $\frac{1}{6}\left(2\frac{1}{2} - \frac{3}{4}\right) + \frac{5}{24}$
a. $\frac{11}{24}$ b. $\frac{7}{24}$ c. $\frac{47}{24}$ d. $\frac{1}{2}$
- _____ 18. A number was multiplied by -4 and decreased by 6. If the result was -34 , what was the number?
a. 7 b. -7 c. 10 d. -10
- _____ 19. If $4x + 2 = 11$, what is the value of $-4x - 1$?
a. 12 b. 10 c. -10 d. 8
- _____ 20. Find the least common multiple of 16, 21, and 24.
a. 2 b. 336 c. 42 d. 8064