Placement Test Review Units 1&2

Linear Equations and Algebra Basics, Geometry

The Math Placement Test Sequence at the College of Western Idaho allows students to test out of Units in the developmental mathematics sequence. The Placement test for Units 1&2 has 15 questions. If you complete a level with a score of 70% or higher, you may attempt the next level in the sequence. You are limited to two attempts per level on the Placement Test. The two attempts must not be on the same day.

Sample problems (and associated **topics**):

1. For the following set of numbers, find the mean, median, and mode: 12, 14, 25, 10, 25, 15, 11. (**Find the mean, median, and mode.**)

2. Round 0.8417 to the nearest hundredth. (**Round numbers**)

3. Find the perimeter and area of a rectangle with a width of 12 cm and a length of 17 cm. (**Find the perimeter and area of common polygons.**)

   12 cm

   17 cm
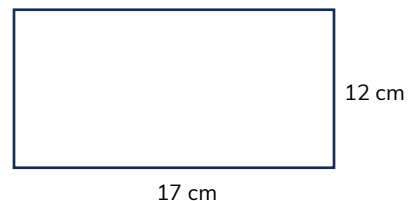
4. Use the Distributive Property to rewrite this expression: $a(a + 4)$. (**Use the Distributive Property.**)

5. Evaluate $3x^2 + 2y$ for $x = 5$ and $y = 4$ (**Evaluate algebraic expressions.**)

6. Change the word phrase into an algebraic expression: The difference between 4 times a number and ten. Use x to represent the number. (**Write word statements as algebraic expressions.**)

7. What is the coefficient and the exponent in the term $-3t^4$? (**Identify terms, coefficients, and like terms of an algebraic expression.**)

8. Convert 65 m to feet. Round your answer to the nearest tenth. (**Make conversions involving American and Metric units of measure.**)

9. Evaluate $(-7)^2$. (**Evaluate exponential expressions.**)

10. A theater ticket for adults is A dollars and the price of a child's ticket is c dollars. If 23 adults and 36 children attend the theater one night, how much money did the theater make? (**Translate word statements into expressions or equations.**)

11. Simplify the expression using the order of operations: $\frac{2+5\cdot7}{2\cdot5+7}$ (**Use the order of operations to evaluate numeric expressions.**)

12. Convert the fraction $\frac{1}{5}$ into a decimal and a percent. (**Convert between percentages, decimals, and fractions.**)

13. Solve $6 - 3x = 5x - 10x + 8$. (**Solve linear equations involving non-simplified expressions.**)

14. Solve for x: $5x - 9 = 11x + 15$. (**Solve equations using both the addition and the multiplication properties of equality.**)

15. Solve the equation: $0.36(18) + 0.06x = 0.18(18 + x)$ (**Solve linear equations containing decimals.**)

16. Solve the linear equation: $-\frac{4}{5}x = \frac{3}{5}$ (**Solve linear equations containing fractions.**)

17. Solve for x: $4(3x - 4) = 20$. (**Solve linear equations involving grouping symbols.**)

18. Solve: $\frac{1}{5}x = -9$ (**Solve one-step equations.**)

19. Use the formula and the values given to find the value of the remaining variable.
    $A = \frac{1}{2}bh$; $b = 30$, $h = 26$ (**Evaluate a formula.**)

20. Find the value of the variable that is not given. $P = a + b + c$
    $P = 31$, $a = 13$, $b = 14$ (**Solve problems involving geometry formulas.**)
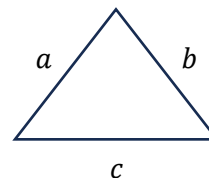
Placement Test Review Units 1&2
Linear Equations and Algebra Basics, Geometry

Answers:

1. Mean: 16, Median: 14, Mode: 25
2. 0.84
3. Perimeter: 58 cm, Area: 204 cm^2
4. $a^2 + 4a$
5. 83
6. $4x - 10$
7. Coefficient: -3, Exponent: 4
8. 213.3 feet or 213.1 feet
9. 49
10. $23A + 36c$
11. $\frac{37}{17}$
12. Decimal: 0.2, Percent: 20%
13. $x = 1$
14. $x = -4$
15. $x = 27$
16. $x = -\frac{3}{4}$
17. $x = 3$
18. $x = -45$
19. $A = 390$
20. $c = 4$

Some websites to help you practice are:

IXL https://www.ixl.com/math/algebra-1

S.O.S Math   http://www.sosmath.com/algebra/algebra.html

Khan Academy   https://www.khanacademy.org/math/algebra?t=practice

Purplemath   http://www.purplemath.com/