Review Test
Practical Math Foundation
Tier 2 Algebra
Introduction to Algebra

1) What is a power tool used for solving complex equations?

2) Solve for X, the unknown: $-15.78 = 12.36X$

3) Solve for X: $X + \sqrt{7} = 4^2$

4) Solve for X: $4.18X - 3.27X - 16.2 = 9.34X + 8.74X + 37.5$

5) Of the four ways to solve an algebra equation, which way does the Foundations course use?

6) Solve for A: $COS^{-1}\ A = 42°$

7) Solve for X: $(4.3)^2X + 5(COS(45)) = \sqrt{(6 + 1/0.4)X^2}$

8) Solve for X: $\sqrt{X} = LOG(4373)$

9) Solve for X: $SIN\ X° = 0.75$

10) Solve for X: $(4/5)/X = 3/20$

11) Given the equation, LS = RS, is LS + A = RS – A a valid application of THE RULE?

12) Solve for X: $(-6.34)^2X = \sqrt{284}/\text{COS}(60)$

13) Solve for A: $\text{SIN}^{-1}\ A = 42°$

14) Solve for X: $X^2 = \sqrt{64}$

15) Solve for X: $1.5^2\sqrt{X} = 4.7^2$

16) Solve for X: $X^2 = 0.5A^2$

17) Solve for X: $3^2/X = \sqrt{12}/15$

18) Solve for X: $\text{COS}\ X° = 0.75$

19) Solve for X: $5/9 = 3/5 + X$

20) What is THE RULE of equation solving?

Review Test Answer Key
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1) Mathematica or Wolfram Alpha
(A1 – Four Ways to Solve an Algebra Equation)
2) X = -1.277 *(A4 – AX = B)*
3) X = 13.35 *(A3 – X + A = B)*
4) -17.17X = 53.7 → X = -3.13 *(A5 – AX + B = CX + D)*
5) Apply a Process *(A1 – Four Ways to Solve an Algebra Equation)*
6) A = 0.74 (*A10 – COS X = A, -1 ≤ A ≤ 1, or COS-1 A = X)*
7) 18.49X + 3.54 = 2.92X → X = -0.23 *(A5 – AX + B = CX + D)*
8) X = 13.26 *(A8 - √X = A)*
9) X = 48.59° *(A9 – SIN X = A, -1 ≤ A ≤ 1, or SIN-1 A = X)*
10) X = 5.33 *(A6 – A/X = C/D)*
11) No, whatever you do to one side of the equation must be done to both sides of the equation. In this example, A is added to the left side (LS), but subtracted from the right side (RS).
(A2 – THE RULE of Algebra)
12) 40.1956X = 16.8523/0.5 → X = 0.839 *(A4 – AX = B)*
13) A = 0.67 *(A9 – SIN X = A, -1 ≤ A ≤ 1, or SIN-1 A = X)*
14) X = 2.83 *(A7 – X2 = A, A ≥ 0)*
15) X = 96.39 *(A8 - √X = A)*
16) X = 0.71A *(A7 – X2 = A, A ≥ 0)*
17) X = 38.97 *(A6 – A/X = C/D)*
18) X = 41.41° *(A10 – COS X = A, -1 ≤ A ≤ 1, or COS-1 A = X)*
19) X = -2/45 *(A3 – X + A = B)*
20) You may do the same thing to both sides of the equation and obtain a new equation. *(A2 – THE RULE of Algebra)*