Review Questions
Algebra 2 and Trig

1 If $\sqrt{x-4} = 7$, what is the value of x?

1) 11
2) 18
3) 45
4) 53

2 If x is a real number, what is the solution set of the equation $\sqrt{1-2x} = 2$?

1) $\left\{\frac{3}{2}\right\}$
2) $\left\{-\frac{3}{2}\right\}$
3) $\{-2\}$
4) $\{\ \}$

3 If $\sqrt{2x-1} + 2 = 5$ then x is equal to

1) 1
2) 2
3) 5
4) 4

4 What is the solution of the equation $\sqrt{2x-3} - 3 = 6$?

1) 42
2) 39
3) 3
4) 6

5 What is the value of x in the equation $\sqrt{3+x} - 5 = -2$?

1) 46
2) 12
3) 3
4) 6

6 What is the solution set of the equation $\sqrt{x^2 - 3x + 3} = 1$?

1) $\{1\}$
2) $\{2\}$
3) $\{1, 2\}$
4) $\{\ \}$

7 The solution set of the equation $\sqrt{x+6} = x$ is

1) $\{-2, 3\}$
2) $\{-2\}$
3) $\{3\}$
4) $\{\ \}$

8 What is the solution set of the equation $\sqrt{9x+10} = x$?

1) $\{-1\}$
2) $\{9\}$
3) $\{10\}$
4) $\{10,-1\}$

9 The solution set of the equation $\sqrt{2x+15} = x$ is

1) $\{5,-3\}$
2) $\{5\}$
3) $\{-3\}$
4) $\{\ \}$

10 What is the solution set of $\sqrt{4x+21} = x$?

1) $\{-3\}$
2) $\{-3,7\}$
3) $\{7\}$
4) $\{\ \}$

11 The solution set of the equation $\sqrt{x+3} = 3-x$ is

1) $\{1\}$
2) $\{0\}$
3) $\{1,6\}$
4) $\{2,3\}$

12 The solution set of the equation $\sqrt{y-2} = 2-y$ is

1) $\{2,3\}$
2) $\{2\}$
3) $\{3\}$
4) ϕ

13 Solve for x: $\frac{4x}{x-3} = 2+\frac{12}{x-3}$

14 Solve for x: $\frac{2}{x}+\frac{3}{5x} = 1$

15 Solve for x: $\frac{2}{3x}+5 = \frac{4}{x}$

16 Solve for all values of x: $\frac{9}{x}+\frac{9}{x-2} = 12$

17 For all values of x for which the expression is defined, solve for x: $\frac{3}{x+3}+\frac{2}{x-4} = \frac{4}{3}$

18 If $x^2 + 2 = 6x$ is solved by completing the square, an intermediate step would be

1) $(x+3)^2 = 7$
2) $(x-3)^2 = 7$
3) $(x-3)^2 = 11$
4) $(x-6)^2 = 34$

19 Max solves a quadratic equation by completing the square. He shows a correct step:

$$(x+2)^2 = -9$$

What are the solutions to his equation?

1) $2 \pm 3i$
2) $-2 \pm 3i$
3) $3 \pm 2i$
4) $-3 \pm 2i$

20 Solve $2x^2 - 12x + 4 = 0$ by completing the square, expressing the result in simplest radical form.