

Name: _____
Date: _____
Class: _____

Algebra
Unit 9
PS

Remember, this assignment is 15 points of your 100 point test grade. You can have this assignment checked as many times as you wish prior to the test. It is due at the beginning of class the day you take the test

1) [3] Simplify: $\sqrt{18} - 4\sqrt{8} + \sqrt{72} - \frac{\sqrt{450}}{5}$

2) [3] Simplify: $2\sqrt{3}(6\sqrt{8} - 4\sqrt{3}) + 16 - 8\sqrt{6}$

3) [2] Evaluate: $15\sqrt{21600x^8y^{10}}$

4) [3] Simplify: $ab\sqrt{448a^5b^3c^8}$

5) [3] Simplify: $(3\sqrt{8x^3y^5})(4xy\sqrt{18x^4y^4})$

6) [4] If the length of a rectangle is $20 - 2\sqrt{3}$ and the width is $6 + 4\sqrt{12}$ find the area and perimeter of this rectangle in simplest radical form.

7) [4] Simplify: $\frac{3\sqrt{108} + 7\sqrt{12}}{\sqrt{192}}$

8) [3] Solve: $50 - 2x^2 = 275 - 6x^2$

9) [3] Solve: $3.5x^3 - 21 = 11 + 4x^3$

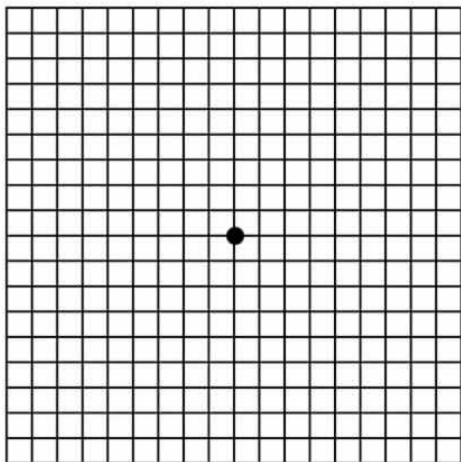
10) [3] Solve: $8\sqrt[3]{2x} - 27 = 7\sqrt[3]{2x} - 24$

11) [4] Solve: $2(3\sqrt{3x} + 23) = 4(16 + \sqrt{3x})$

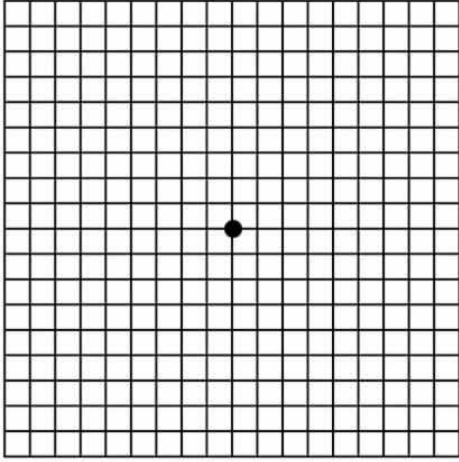
12) [4] Solve (simplest radical form): $\frac{7}{5}x^2 + 22.5 = \frac{15}{2} + \frac{8}{5}x^2$

13) [5] If the perimeter of a square is $6\sqrt{3} + \sqrt{96}$ find the square's area in simplest radical form.

14) [3] Graph: $u(x) = 5\sqrt{4x}$ on the interval $0 < x \leq 4$



15) [3] Graph: $y = \frac{1}{3}\sqrt[3]{27x}$ on the interval $-8 \leq x \leq 8$



16) [3] Find $h(2)$ if $h(x) = 4x - 2x^2 + 8\sqrt{27x} - 10\sqrt[3]{10x^2 + 14x - 4}$

17) [4] Find $y(-4)$ in simplest radical form:

$$y(x) = 6\sqrt{1-x} - \sqrt{36-x^2} + 2\sqrt{28-5x+2x^2}$$