Algebra 1 – Radical Review **Name _____**

Simplify.

1. $\sqrt{121}$ _____ 2. $\sqrt{\frac{9}{81}}$ _____ 3. $\sqrt{16x^{16}}$ _____

4. $\sqrt{16x^{16}}$ _____ 5. $\sqrt{81x^{6}}$ _____ 6. $\sqrt{\frac{a^{10}}{b^{4}}}$

Simplify. Leave answers in radical form if necessary. No Decimals.

7. $\sqrt{63}$

8. $4\sqrt{300}$

9. $-2\sqrt{72}$

10. $\sqrt{54x^{7}}$

11. $3\sqrt{24x^{4}y^{9}}$

Simplify. Leave answers in radical form if necessary. No Decimals.

12. $2\sqrt{32}\cdot 4\sqrt{2}$ 13. $\sqrt{5}\cdot 2\sqrt{10}$ 14. $2\sqrt{3x^{5}}\cdot 4\sqrt{6x^{3}}$

15. $\frac{4}{\sqrt{5}}$ 16. $\frac{\sqrt{3}}{\sqrt{7}}$ 17. $\frac{30}{\sqrt{15}}$

Simplify. Leave answers in radical form if necessary. No Decimals.

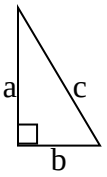
18. $5\sqrt{3} + 4\sqrt{2} - 2\sqrt{3} + \sqrt{2}$

19. $5\sqrt{27} + \sqrt{75}$

Find the missing length to the nearest tenth. $\boxed{a^2 + b^2 = c^2}$

20. a = 12, b = 5, c = _____

21. a = 11, b = _____ , c = 18



22. Find the distance between (4, 5) and (1, –11).

Distance Formula $\boxed{d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}}$