

Algebra II Homework #17

- 1) Find the distance between the points (5, -2) and (-3, -5).
- 2) Simplify: $\frac{-2c^0 - a^3}{-y - x^2}$ if $a = -2$, $c = -7$, $x = -3$, and $y = -5$
- 3) Find the equation of the line having a slope of $\frac{-5}{12}$ and goes through the point (-8, -3).
- 4) Solve: $\frac{2}{x^2 - 7x + 12} = \frac{3}{x - 4} - \frac{2}{x - 3}$
- 5) If seven less than the product of a number and four is eight more than the quotient of the number and three, find the number.
- 6) Simplify: $\sqrt[3]{1512x^7y^2a^{10}}$
- 7) Simplify: $5x\sqrt{72x^3} - 3\sqrt{98x^5} + 4x^2\sqrt{343x^4a^3} - xa\sqrt{1183x^6a}$
- 8) Simplify: $(3xa^2\sqrt{48x^3a^2} - x^3a\sqrt{242x^4a^5})(2x^2a^2\sqrt{50x^2a^3} + 4xa\sqrt{27xa^4})$
- 9) Simplify: $\frac{\sqrt{54}}{\sqrt{72}}$
- 10) Write $\sqrt[4]{x^5} \cdot \sqrt[3]{x^2}$ as a single radical.
- 11) Simplify: $\frac{3^{\frac{1}{4}}(3^{\frac{-2}{3}}x^{\frac{3}{4}}y^{\frac{-5}{6}}a^{\frac{4}{2}})^{\frac{4}{3}}}{3^{\frac{-5}{6}}(x^{\frac{-3}{2}}y^{\frac{1}{4}}a^{\frac{-2}{2}})^{\frac{4}{3}}}$
- 12) Simplify: $\sqrt[4]{567x^3y^{14}a^9}$
- 13) Simplify: $6\sqrt{847y^5a} + \sqrt{1859y^3a^3} - 3y^2\sqrt{252ya} + 4ya\sqrt{539ya}$
- 14) Simplify: $(\sqrt{54x^4a} - \sqrt{48x^3a^5})(\sqrt{120xa^3} - \sqrt{162x^2a^6})$
- 15) Simplify: $\frac{5 - \sqrt{18}}{5 + \sqrt{8}}$

Copyright © 2013 by Dr. Joseph Phillips

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without prior written permission from the author.

16) Write $\sqrt[5]{x^7} \cdot \sqrt[4]{x^9}$ as a single radical.

17) Simplify: $\frac{(2^{\frac{4}{3}} x^{\frac{2}{5}} y^{\frac{1}{3}} a^{\frac{5}{3}})^{\frac{3}{4}}}{2^{10} (x^6 y^2 a^6)^{\frac{5}{9}}}$

18) Simplify: $\frac{\sqrt[3]{36}}{\sqrt[3]{32}}$

19) Write $\sqrt[6]{x^4} \cdot \sqrt[9]{x^5}$ as a single radical.

20) Simplify: $\frac{(5^{\frac{3}{8}} x^{\frac{-1}{6}} y^{\frac{3}{4}} a^{\frac{-1}{2}})^{\frac{8}{3}}}{(5^{12} x^6 y^4 a^3)^{\frac{-5}{9}}}$

Copyright © 2013 by Dr. Joseph Phillips

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without prior written permission from the author.