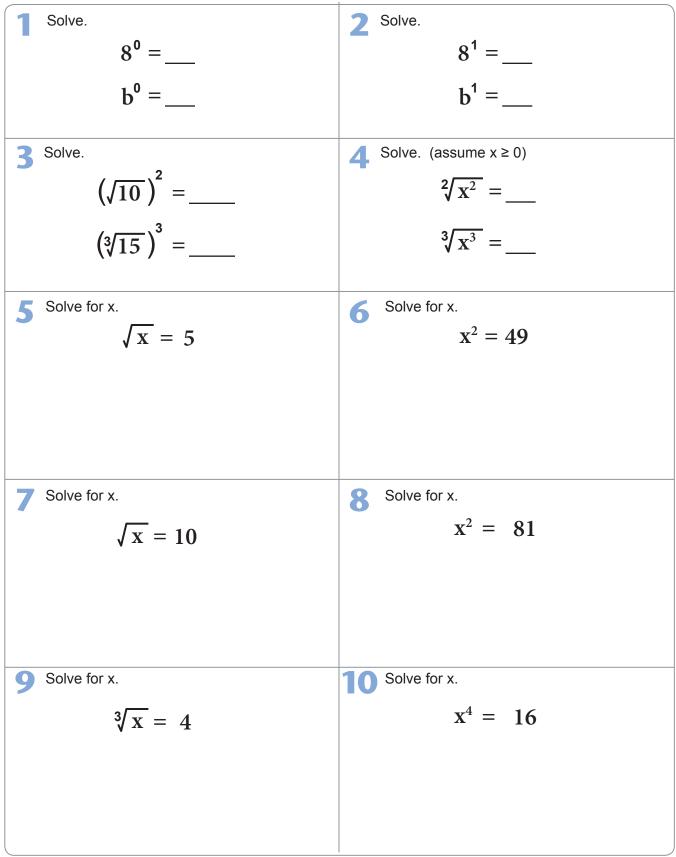
Date:

math Antics





Date:

math Antics[®] Exercises

Exponents In Algebra

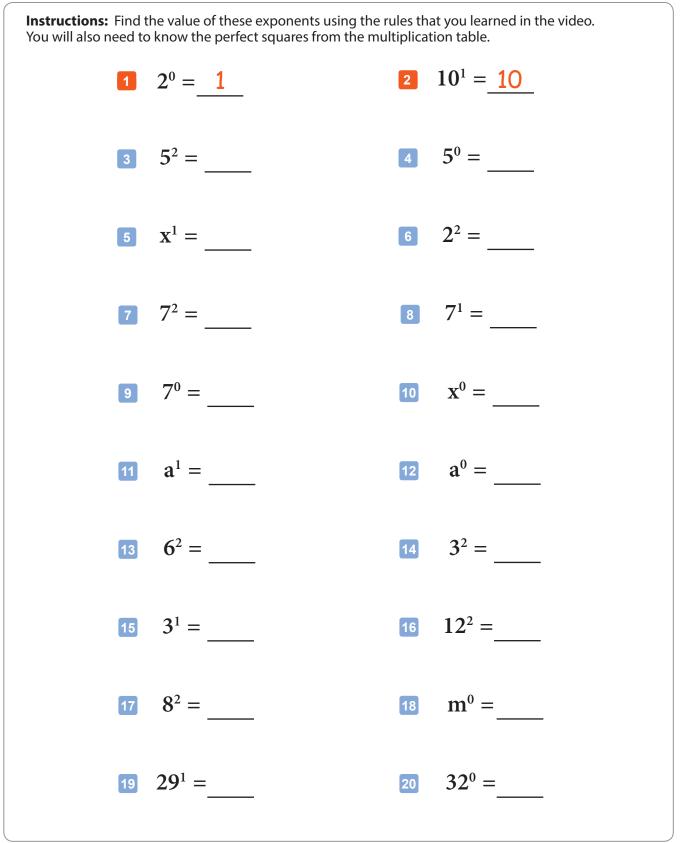
Solve. $8^0 = 1$	2 Solve. $8^1 = 8$
o – <u> </u>	o – <u> </u>
b ^o = <u>1</u>	$b^1 = \underline{b}$
3 Solve.	4 Solve. (assume $x \ge 0$)
$\left(\sqrt{10}\right)^2 = \underline{10}$	$\sqrt[2]{x^2} = \underline{x}$
$(\sqrt[3]{15})^3 = 15$	$\sqrt[3]{x^3} = \underline{\times}$
5 Solve for x.	6 Solve for x.
$\sqrt{\mathbf{x}} = 5$	$x^2 = 49$
$\sqrt{x^2} = 5^2$	$\sqrt{x^2} = \pm \sqrt{49}$
x = 25	$x = \pm 7$
7 Solve for x.	8 Solve for x.
$\sqrt{\mathbf{x}} = 10$	$x^2 = 81$
$\sqrt{x}^2 = 10^2$	$\sqrt{x^2} = \pm \sqrt{81}$
x = 100	x = ±9
9 Solve for x.	10 Solve for x.
$\sqrt[3]{x} = 4$	$x^4 = 16$
$\sqrt[3]{x}^{3} = 4^{3}$	$\sqrt[4]{x^4} = \pm \sqrt[4]{16}$
x = 64	x = ±2
www.mathantics.comSee Video for step-by-step solutions to each problem.© 2015 Math Plus Motion, LLC	



Date:

A-EIA 1

Exponent Rules Practice

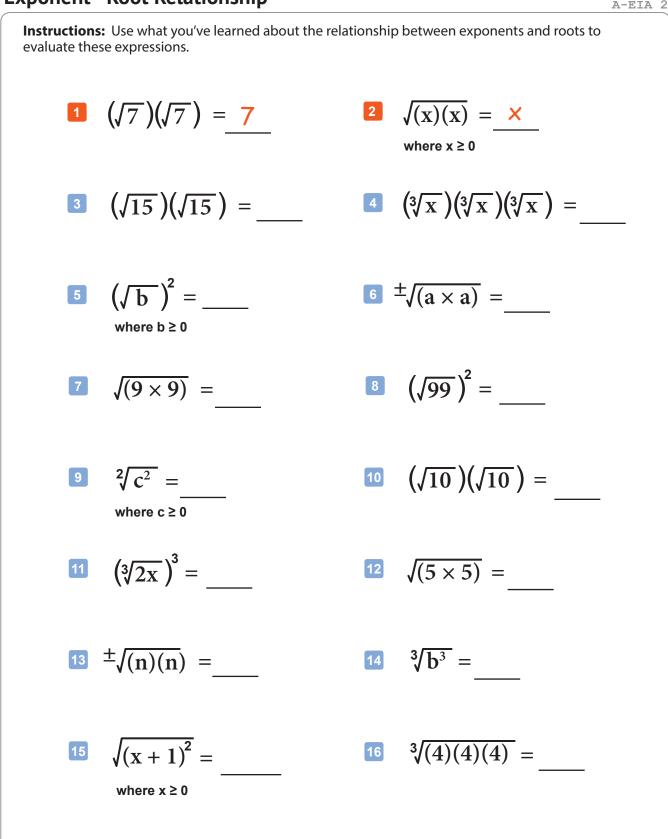




Date:

Exponent - Root Relationship

A-EIA 2



math Antics Worksheets

Name:

Date:

A-ESR 3

1-Step Equations with Exponents & Roots - Set 1

Instructions: Solve for x. (Remember to do the same thing to both sides of the equation.) 2 $x^2 = 49$ $\sqrt{\mathbf{x}} = 4$ 1 $\sqrt{x^{2}} = 4^{2}$ $\sqrt{x^2} = \pm \sqrt{49}$ (x = 16) $x = \pm 7$ 3 $x^2 = 100$ $\sqrt{x} = 2$ $x^2 = 81$ $\int \sqrt{x} = 8$ 8 $x^3 = 8$ 7 $11 = \sqrt{x}$ 10 $\sqrt[3]{x} = 5$ 9 $x^2 = 36$



math Antics Worksheets

Name:

Date:

A-ESR 4

1-Step Equations with Exponents & Roots - Set 2

Instructions: Solve for x. (Remember to do the same thing to both sides of the equation.) $x^2 = 64$ $\sqrt{x} = 6$ 1 $x^2 = 400$ 4 $\sqrt{x} = 12$ $x^4 = 81$ $\sqrt{5}$ $\sqrt[3]{x} = 6$ 8 $x^3 = 125$ $\sqrt[7]{3/x} = 2$ 10 $x^3 = 27$ 9 $x^2 = 144$





Date:

A-EIA 1

Exponent Rules Practice

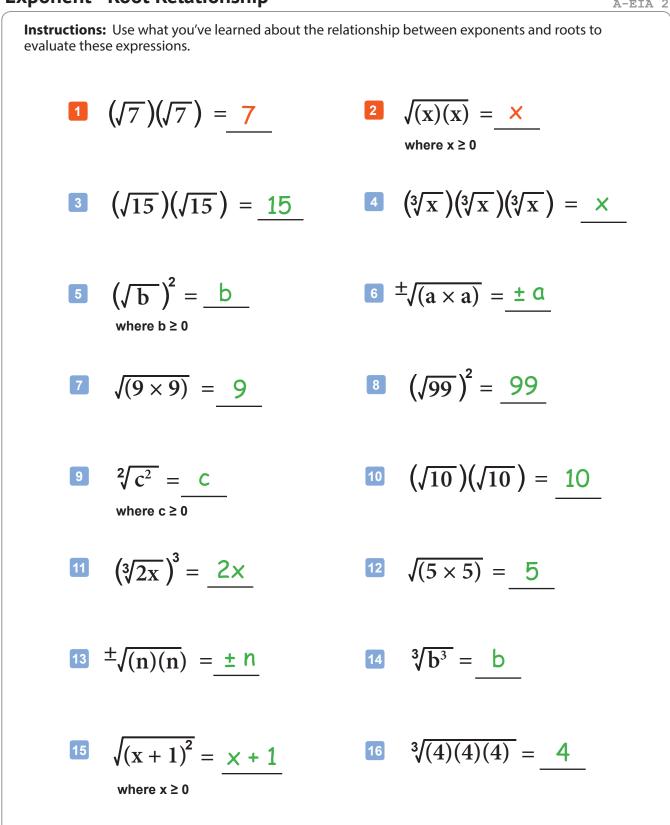
Instructions: Find the value of these exponents using the rules that you learned in the video. You will also need to know the perfect squares from the multiplication table.		
1	$2^{0} = 1$	2 $10^1 = 10$
3	5 ² = <u>25</u>	4 $5^0 = 1$
5	$\mathbf{x}^1 = \underline{\mathbf{x}}$	6 $2^2 = 4$
7	7 ² = <u>49</u>	8 $7^1 = _7_1$
9	7 ⁰ = <u>1</u>	10 $x^0 = 1$
11	$a^1 = \underline{a}$	12 $a^0 = 1$
13	$6^2 = 36$	14 $3^2 = 9$
15	$3^1 = 3$	16 $12^2 = 144$
17	8 ² = <u>64</u>	18 $m^0 = 1$
19	29 ¹ = <u>29</u>	20 $32^{\circ} = 1$



Date:

Exponent - Root Relationship

A-EIA 2



© 2015 Math Plus Motion, LLC

Math Antics[®] Worksheets Name:

Date:

A-ESR 3

1-Step Equations with Exponents & Roots - Set 1

Instructions: Solve for x. (Remember to do the same thing to both sides of the equation.) 2 $x^2 = 49$ $\sqrt{\mathbf{x}} = 4$ 1 $\sqrt{x^2} = \pm \sqrt{49}$ $\sqrt{x^{2}} = 4^{2}$ x = 16 $x = \pm 7$ $\sqrt{x} = 2$ $x^2 = 100$ $\sqrt{x^{2}} = 2^{2}$ $\sqrt{x^2} = \pm \sqrt{100}$ x = 4 $(x = \pm 10)$ $x^2 = 81$ $\int \sqrt{x} = 8$ $\sqrt{x^2} = \pm \sqrt{81}$ $\int x^{2} = 8^{2}$ x = ±9 x = 648 $x^3 = 8$ 7 $11 = \sqrt{x}$ $\sqrt[3]{x^3} = \sqrt[3]{8}$ $11^2 = \sqrt{x}^2$ x = 2 121 = xor x = 121 10 $\sqrt[3]{x} = 5$ 9 $x^2 = 36$ $\sqrt[3]{x}^{3} = 5^{3}$ $\sqrt{x^2} = \pm \sqrt{36}$ x = ±6 x = 125

Math Antics[®] Worksheets Name:

Date:

A-ESR 4

1-Step Equations with Exponents & Roots - Set 2

Instructions: Solve for x. (Remember to do the same thing to both sides of the equation.) $x^2 = 64$ $\sqrt{\mathbf{x}} = \mathbf{6}$ 1 2 $\sqrt{x^2} = \pm \sqrt{64}$ $\int x^{2} = 6^{2}$ $x = \pm 8$ (x = 36) $x^2 = 400$ $\sqrt{x} = 12$ $\int x^{2} = 12^{2}$ $\sqrt{x^2} = \pm \sqrt{400}$ $x = \pm 20$ (x = 144) $x^4 = 81$ $\sqrt{5}$ $\sqrt[3]{x} = 6$ $\sqrt[4]{x^4} = \pm \sqrt[4]{81}$ $\sqrt[3]{x}^{3} = 6^{3}$ x = ±3 (x = 216) 8 $x^3 = 125$ $\sqrt{3}x = 2$ $\sqrt[3]{x^3} = \sqrt[3]{125}$ $\sqrt[3]{x}^{3} = 2^{3}$ x = 5 x = 8 10 $x^3 = 27$ 9 $x^2 = 144$ $\sqrt[3]{x^3} = \sqrt[3]{27}$ $\sqrt{x^2} = \pm \sqrt{144}$ x = 3 $(x = \pm 12)$