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| **Unit 4 Placemat (Foundations skills needed for Unit 4)** |
| **Simplify each radical: \*\*Work out on the back\*\***1. $\sqrt{848}$
2. $\sqrt{-216}$
3. $\sqrt[3]{81}$
4. $\sqrt[3]{128}$
5. $3\sqrt{44}$
6. $5\sqrt[3]{64}$
 | **Exponent Rules:**1. $Product Rule$

Ex. $\left(3x^{2}\right)\left(2x^{6}\right)$1. $Quotient Rule$

Ex. $\frac{6y^{7}}{2y^{4}}$1. $Power Rule$

Ex. $\left(3m^{3}\right)^{4}$1. $Negative Exponents$

Ex. $\frac{3h^{-2}}{4m^{-3}}$1. $Anything to the power of 0= \\_\\_\\_\\_\\_\\_\\_$

Ex. $\left(4m^{2}ny^{7}\right)^{0}$ | **Isolate the radical for each of the following:**1. $\sqrt{m}-4=18$
2. $\sqrt[3]{y-8}+y=7$
3. $5\sqrt[4]{x+3}-2=23$
 | **Solve each of the following equations:**1. $2x-3\left(x+1\right)=10$
2. $4x-2\left(2x+1\right)=x$
3. $3m+4=7m-4$
4. $\left(4x-1\right)\left(x+2\right)=10$
5. $2\left(x-1\right)^{2}=16$
6. $4\left(x+2\right)^{2}=100$
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| **Simplify each of the following using properties of exponents:**1. $\frac{\left(gh\right)^{2}}{h^{4}}$
2. $\left(r^{6}t^{3}\right)^{4}(15r^{8})$
3. $\frac{4mn^{6}}{16m^{7}n}$
4. $(3x^{2})(5x)$
5. $\left(7m\right)\left(2m^{2}\right)\left(m^{7}\right)$
6. $3h^{2}y\left(2y^{4}\right)^{2}$

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