Problem 1 *Simplify the following type one radical. Notice that the root symbol is already supplied for you so you only need to supply the inside and outside functions (no need to expand them!)*

$$\sqrt[2]{(5\,x+6)(5\,x-7)(2\,x-9)^4(x-1)^2} = \left(\boxed{(2\,x-9)^2|x-1|}\right)\sqrt[2]{\boxed{(5\,x+6)(5\,x-7)}}$$

Feedback(`attempt`): *The process for this problem is much like the previous practice tile, but there is one twist here. Remember that, for odd valued roots (like cube or fifth roots) the process is the same, but for even roots you have to worry about absolute values when you pull out a factor. The rule of thumb is to apply absolute values to anything you pull out of an even radical when you are simplifying, and **then** justify whether or not you can remove those absolute values on a term by term basis (for example, numbers don't need absolute values because you can calculate the absolute value of a constant. Even powered terms outside also don't need absolute values because they are already being raised to an even power and thus must become positive anyway).*

Problem 2 *Simplify the following type one radical. Notice that the root symbol is already supplied for you so you only need to supply the inside and outside functions (no need to expand them!)*

$$\sqrt[8]{(4\,x+5)^6(3\,x-4)^{38}(2\,x+5)^3(x+1)^{38}} = \left(\boxed{(3\,x-4)^4(x+1)^4}\right)\sqrt[8]{\boxed{(4\,x+5)^6(3\,x-4)^6(2\,x+5)^3(x+1)^6}}$$

Feedback(`attempt`): *The process for this problem is much like the previous practice tile, but there is one twist here. Remember that, for odd valued roots (like cube or fifth roots) the process is the same, but for even roots you have to worry about absolute values when you pull out a factor. The rule of thumb is to apply absolute values to anything you pull out of an even radical when you are simplifying, and **then** justify whether or not you can remove those absolute values on a term by term basis (for example, numbers don't need absolute values because you can calculate the absolute value of a constant. Even powered terms outside also don't need absolute values because they are already being raised to an even power and thus must become positive anyway).*

Problem 3 *Simplify the following type one radical. Notice that the root symbol is already supplied for you so you only need to supply the inside and outside functions (no need to expand them!)*

$$\sqrt[6]{(4\,x+3)^4(3\,x+1)^{27}(3\,x-10)^{18}(x+8)^{13}} = \left(\boxed{(3\,x+1)^4(x+8)^2|3\,x-10|^3}\right)\sqrt[6]{\boxed{(4\,x+3)^4(3\,x+1)^3(x+8)}}$$

Feedback(*`attempt`*): *The process for this problem is much like the previous practice tile, but there is one twist here. Remember that, for odd valued roots (like cube or fifth roots) the process is the same, but for even roots you have to worry about absolute values when you pull out a factor. The rule of thumb is to apply absolute values to anything you pull out of an even radical when you are simplifying, and **then** justify whether or not you can remove those absolute values on a term by term basis (for example, numbers don't need absolute values because you can calculate the absolute value of a constant. Even powered terms outside also don't need absolute values because they are already being raised to an even power and thus must become positive anyway).*

Problem 4 *Simplify the following type one radical. Notice that the root symbol is already supplied for you so you only need to supply the inside and outside functions (no need to expand them!)*

$$\sqrt[5]{(5x+6)^{11}(4x-3)^{13}(3x-10)^{7}(x+2)^{29}} = \left(\boxed{(5x+6)^2(4x-3)^2(3x-10)(x+2)^5}\right)\sqrt[5]{\boxed{(5x+6)(4x-3)^3}}$$

Feedback(*`attempt`*): *The process for this problem is much like the previous practice tile, but there is one twist here. Remember that, for odd valued roots (like cube or fifth roots) the process is the same, but for even roots you have to worry about absolute values when you pull out a factor. The rule of thumb is to apply absolute values to anything you pull out of an even radical when you are simplifying, and **then** justify whether or not you can remove those absolute values on a term by term basis (for example, numbers don't need absolute values because you can calculate the absolute value of a constant. Even powered terms outside also don't need absolute values because they are already being raised to an even power and thus must become positive anyway).*

Problem 5 *Simplify the following type one radical. Notice that the root symbol is already supplied for you so you only need to supply the inside and outside functions (no need to expand them!)*

$$\sqrt[2]{(5x-2)(5x-9)^2(3x-4)^3(3x-8)^{11}} = \left(\boxed{|5x-9||3x-4||3x-8|^5}\right)\sqrt[2]{\boxed{(5x-2)(3x-4)(3x-8)}}$$

Feedback(*`attempt`*): *The process for this problem is much like the previous practice tile, but there is one twist here. Remember that, for odd valued roots (like cube or fifth roots) the process is the same, but for even roots you have to worry about absolute values when you pull out a factor. The rule of thumb is to apply absolute* *values to anything you pull out of an even radical when you are simplifying, and* ***then*** *justify whether or not you can remove those absolute values on a term by term basis (for example, numbers don't need absolute values because you can calculate the absolute value of a constant. Even powered terms outside also don't need absolute values because they are already being raised to an even power and thus must become positive anyway).*