Debbie DeMaria & Sharon Smothers

Spicy Plum Chicken Thighs
Recipe courtesy Bobby Flay
http://www.foodnetwork.com/food/recipes/recipe/0,,FOOD_9936_6670,00.html

Plum Sauce 8 chicken thighs, skin on, bone in, Salt and freshly ground pepper

1. If \( f(x) = 2x \), then \( f'(2) = \)
   __ tablespoons peanut oil

2. On [-2,2] \( f(x) \) non-differentiable at \( x = -1 \) and
   __ small onion, coarsely chopped

3. \( f(x) = x^2 \)  \( f'(2) = \)
   __ cloves garlic, coarsely chopped

4. Find \( f'(1) \) of \( f(x) = \frac{3x}{x^2 + 1} + \ln x \)
   __ tablespoon fresh ginger, coarsely chopped

5. If \( y = \left( \frac{1}{\sec^2 x} + \frac{1}{\csc^2 x} \right)^3 \) then \( y' + 1 = ? \)
   __ Thai chile, coarsely chopped

6. If \( f(x) = \frac{x^2}{2} + \frac{x^2(x-2)}{x+1} \) then \( f'(1) = \)
   __ teaspoon ground cinnamon

7. If \( f(x) = \frac{x^3 + 2x^2 - x}{x} \) then \( f\left(\frac{7}{8}\right) \) is
   __ teaspoon ground cloves

8. \( \frac{d}{dx} \left( \frac{e^{6x}}{4} \right) \)
   __ pounds red or purple plums, pitted and coarsely chopped

9. Given \( f(x) = x^3 + 2x^2 + x \) find \( f''(\frac{5}{8}) \)
   __ cup honey & soy sauce

10. Suppose the \( u \) and \( v \) are differentiable functions and that \( u(0)=1, v(0)=2, u'(0)=3, u'(2)=4, v'(0)=5, v'(1)=6. \)
    If \( w = u(v(x)) \), find \( \frac{w'(0)}{10} \)
    __ tablespoons fresh lime juice

11. Find the velocity at \( t = 5 \) of a particle that moves along the x-axis and its position in time
    is given as \( s(t) = \frac{t^2 - 1}{t-1}, t \geq 0 \), where \( t \) is measured in seconds and \( s \) in meters.
    __ tablespoon granulated sugar

Use side burner or grill. Heat oil in a medium saucepan over medium-high heat. Add onions and garlic and cook until soft. Add ginger, chile pepper, cinnamon and cloves and cook for 2 minutes. Add remaining ingredients and cook until plums are soft and mixture has thickened. Place mixture in a food processor and mix until smooth. Let cool.

Preheat grill. Season chicken with salt and pepper to taste. Grill, on 1 side for 5 minutes, or until golden brown. Turn the chicken over, brush with the sauce and continue grilling for 3 to 4 minutes, turn over and brush with sauce. Continue grilling and brushing with the sauce until the chicken is cooked through, approximately 12 to 15 minutes.

Yield: 4 servings

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**Plum Sauce**

1. If \( f(x) = 2x \), then \( f'(2) = \) __2__ tablespoons peanut oil__

2. On \([-2,2]\) \( f(x) \) non-differentiable at \( x = -1 \) and

3. \( f(x) = x^2 \) \( f'(2) = \) __4__ cloves garlic, coarsely chopped

4. Find \( f'(1) \) of \( f(x) = \frac{3x}{x^2 + 1} + \ln x \) \( 1 \) tablespoon fresh ginger, coarsely chopped

5. If \( y = \left( \frac{1}{\sec^2 x} + \frac{1}{\csc^2 x} \right)^7 \) then \( y'+1 = ? \) __1__ Thai chile, coarsely chopped

6. If \( f(x) = x + \frac{x^2(x-2)}{x+1} \) then \( f'(1) = \) __1/4__ teaspoon ground cinnamon

7. If \( f(x) = \frac{x^3 + 2x^2 - x}{x} \) then \( f\left(\frac{-7}{8}\right) \) is __1/4__ teaspoon ground cloves

8. \( \frac{d}{dx}\left(\frac{e^{\ln 6x}}{4}\right) = \) __1 1/2__ pounds red or purple plums, pitted and coarsely chopped

9. Given \( f(x) = x^3 + 2x^2 + x \) find \( f''\left(\frac{-5}{8}\right) = \) __1/4__ cup honey & soy sauce

10. Suppose the \( u \) and \( v \) are differentiable functions and that \( u(0)=1, v(0)=2, u'(0)=3, u'(2)=4, v'(0)=5, v'(1)=6 \). If \( w = u\left(v(x)\right) \), find \( \frac{w'(0)}{10} \) __2__ tablespoons fresh lime juice

11. Find the velocity at \( t = 5 \) of a particle that moves along the \( x \)-axis and its position in time is given as \( s(t) = \frac{t^2 - 1}{t - 1}, t \geq 0 \), where \( t \) is measured in seconds and \( s \) in meters. __1__ tablespoon granulated sugar

Use side burner or grill. Heat oil in a medium saucepan over medium-high heat. Add onions and garlic and cook until soft. Add ginger, chile pepper, cinnamon and cloves and cook for 2 minutes. Add remaining ingredients and cook until plums are soft and mixture has thickened. Place mixture in a food processor and mix until smooth. Let cool.

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