## Special Points - Worksheet

- 1. Find the critical points of f(x) = 4x+7.
- 6. Find inflection point(s) of g(x) where  $g'(x) = \sin(e^{x^2})$ .
- 2. Find the critical point of  $g(x) = 4x + \frac{1}{x}$ .
- 7. Find critical point(s) of h(y) where  $h'(y) = 7y^2 28$ .
- 3. Find inflection point of  $u(x) = x^2 \ln(x)$ .
- 8. Find the inflection point(s) of f(x) where  $\frac{df}{dx} = x(b-x)$ .
- 4. Find inflections point(s) of f(x) where  $f''(x) = \ln(x^2 + x 11)$ .
- 9. If  $\theta^*$  is an inflection point of  $w(\theta) = e^{-a\theta}\cos(b\theta)$ , where  $a \neq b$ , find the equation satisfied by  $\theta^*$ .

5. Find critical point(s) of  $f(x) = x2^{x^2-16x}$ .

10. Find critical point(s) of h(x) where h''(x) = 5 and h'(0) = 10.

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