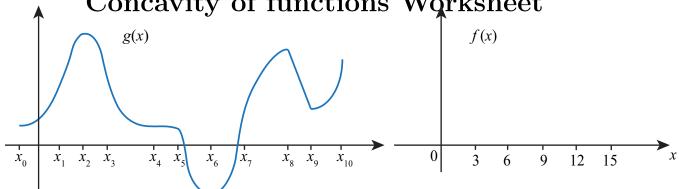
Concavity of functions Worksheet



- 1. Find the interval(s) where q(x) is concave up.
- $5x^2 6x$ is concave up.
- 2. Find the interval(s) where g(x) is concave down.
- 7. Find the interval(s) where $v(y) = \ln(y^2)$ is concave up.
- 3. Find the interval(s) where q(x) is decreasing & concave up.
- 8. Find the interval(s) where $f(x) = e^{1-x^2}$ is concave down.
- 4. Find the interval(s) where g(x) is increasing & concave down.
- 9. Find the interval(s) where h(x) = $6x^3 - 2x^4$ is concave up.
- 5. Find the interval(s) where g(x) is neither concave up nor down.
- 10. Sketch f(x) satisfying:(i) f''(x) > 0 for $6 \le x \le 9; f''(x) < 0 \text{ for } 9 \le x \le 12$ and $x \le 3$; f''(x) = 0 for x > 12.
- 6. Find the interval(s) where u(x) =
- (ii) f'(x) > 0 for $x \le 6 \& x \ge 12$; f'(x) < 0 for 6 < x < 12.

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