

Set 18: Shape of f graphs

~~"it" is increasing~~

$$f'' := (f')'$$

If $f' > 0$ on an interval I , then f is increasing on I .

If $f' < 0$ " " f is decreasing "

If $f'' > 0$ on I , then f' is increasing on I , and f is concave up on I .

If $f'' < 0$ on I , then f' is decreasing on I , and f is concave down on I .