Rectangle Approximations

Let LE_n represent the **left endpoint** area approximation with n rectangles (n sub-intervals).
Let RE_n represent the **right endpoint** area approximation with n rectangles (n sub-intervals).
Let M_n represent the **midpoint** area approximation with n rectangles (n sub-intervals).
Let I_n represent the area approximation with n **inscribed** rectangles (n sub-intervals).
Let C_n represent the area approximation with n **circumscribed** rectangles (n sub-intervals).

Fill in the blanks with either LE_n or RE_n:

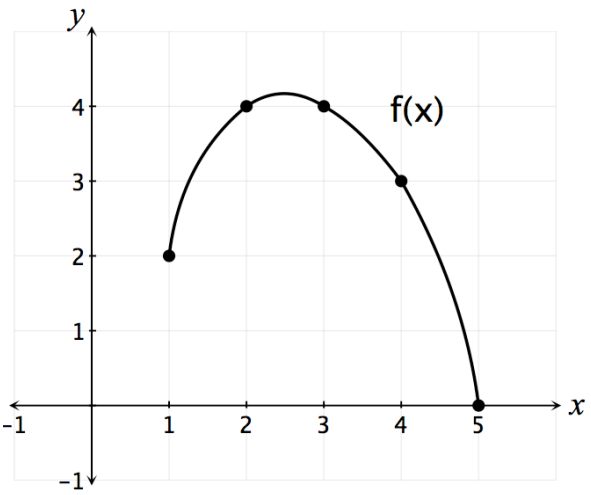
1. If $f(x)$ is increasing, then

$I_n =$ ☐ $\qquad C_n =$ ☐

2. If $f(x)$ is decreasing, then

$I_n =$ ☐ $\qquad C_n =$ ☐

3.



Find the area under the curve on the interval $[1, 5]$ using the given method of approximation (if possible):

$LE_4 =$

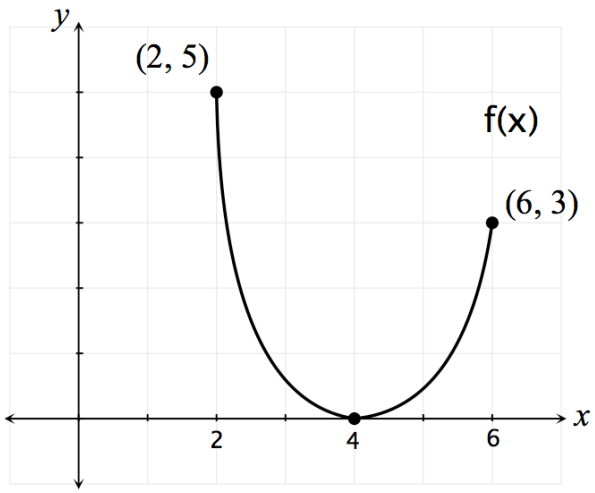
$RE_4 =$

$I_4 =$

$C_4 =$

$M_2 =$

4.



Find the area under the curve on the interval $[2, 6]$ using the given method of approximation (if possible):

$M_1 =$

$LE_2 =$

$RE_2 =$

$I_2 =$

$C_2 =$