

$$\lim_{x \rightarrow -1} \frac{x^n + 1}{x + 1} \quad .30 \quad (n \text{ אי זוגי})$$

$$\lim_{x \rightarrow 7} \frac{x - 7}{\sqrt{x + 2} - 3} \quad .32$$

$$\lim_{x \rightarrow 5} \frac{2x - 10}{5 - \sqrt{x + 20}} \quad .34$$

$$\lim_{x \rightarrow 3} \frac{\sqrt{x^2 - x + 3} - 3}{x^2 - 9} \quad .36$$

$$\lim_{x \rightarrow 8} \frac{\sqrt{x + 3} - 3}{\sqrt{x - 2} - 2} \quad .38$$

$$\lim_{x \rightarrow 4} \frac{\sqrt{x^2 + 9} - 5}{\sqrt{x - 3} - 1} \quad .40$$

$$\lim_{x \rightarrow 5} \frac{\sqrt[3]{x + 3} - 2}{x - 5} \quad .42$$

$$\lim_{x \rightarrow 1} \frac{x^n - 1}{x - 1} \quad .29$$

$$\lim_{x \rightarrow 4} \frac{\sqrt{x} - 2}{x - 4} \quad .31$$

$$\lim_{x \rightarrow 1} \frac{\sqrt{x + 3} - 2}{x - 1} \quad .33$$

$$\lim_{x \rightarrow 3} \frac{\sqrt{x^2 + 7} - 4}{x - 3} \quad .35$$

$$\lim_{x \rightarrow 5} \frac{\sqrt{2x + 6} - \sqrt{x + 11}}{2x - 10} \quad .37$$

$$\lim_{x \rightarrow 2} \frac{3 - \sqrt{2x + 5}}{2 - \sqrt{3x - 2}} \quad .39$$

$$\lim_{x \rightarrow 0} \frac{\sqrt[3]{x + 8} - 2}{x} \quad .41$$

תשובות:

.n .30 .n .29 .n .30 .n .29

.0.25 .33 .6 .32 .0.25 .31

$\frac{1}{16}$  .37  $\frac{5}{36}$  .36 .0.75 .35 .-20 .34

$\frac{1}{12}$  .42  $\frac{1}{12}$  .41  $\frac{8}{5}$  .40  $\frac{4}{9}$  .39  $\frac{2}{3}$  .38

חשב את הגבולות הבאים:

$$\lim_{x \rightarrow 0} \frac{2x^2 + 8x}{x^2 - 5x} \quad .11$$

$$\lim_{x \rightarrow 0} \frac{x^2 - 6x}{x} \quad .10$$

$$\lim_{x \rightarrow 0} \frac{x^2 + 3x}{x} \quad .9$$

$$\lim_{x \rightarrow 0} \frac{x^4 - 5x^2}{3x^3 + 2x^2} \quad .13$$

$$\lim_{x \rightarrow 0} \frac{x^3 - 5x^2 + 6x}{3x^3 + 7x^2 - 3x} \quad .12$$

$$\lim_{x \rightarrow 0} \frac{2x^2 + 8x}{x^2 - 5x} \quad .11$$

$$\lim_{x \rightarrow -4} \frac{x^2 - 16}{x^2 + 4x} \quad .16$$

$$\lim_{x \rightarrow 3} \frac{x^2 - 9}{x - 3} \quad .15$$

$$\lim_{x \rightarrow 0} \frac{x^5 + 3x^3}{x^4 - 4x^2} \quad .14$$

$$\lim_{x \rightarrow -2} \frac{x^3 + 2x^2}{x^3 - 4x} \quad .19$$

$$\lim_{x \rightarrow 1} \frac{1 - x^2}{x^2 - x^3} \quad .18$$

$$\lim_{x \rightarrow 2} \frac{x^3 - 4x}{3x - 6} \quad .17$$

$$\lim_{x \rightarrow -4} \frac{x^2 + 11x + 28}{x^2 + 6x + 8} \quad .21$$

$$\lim_{x \rightarrow 2} \frac{x^2 - 7x + 10}{x - 2} \quad .20$$

$$\lim_{x \rightarrow \frac{3}{2}} \frac{3x^2 - 11x + 6}{6x^2 + 11x - 10} \quad .24$$

$$\lim_{x \rightarrow 4} \frac{(x - 4)^2}{x^2 - 16} \quad .23$$

$$\lim_{x \rightarrow 5} \frac{x^2 - 2x - 15}{x^2 - 25} \quad .22$$

$$\lim_{x \rightarrow -2} \frac{x^3 + 8}{x + 2} \quad .27$$

$$\lim_{x \rightarrow 1} \frac{x^3 - 1}{x - 1} \quad .26$$

$$\lim_{x \rightarrow -\frac{1}{2}} \frac{8x^2 + 10x + 3}{12x^2 + 20x + 7} \quad .25$$

$$\lim_{x \rightarrow 3} \frac{x^4 - 81}{x - 3} \quad .28$$

תשובות:

.-1.6 .11 .-6 .10 .3 .9

.-2.5 .13 .-2 .12

$\frac{8}{3}$  .17 .2 .16 .6 .15 .0 .14

.-3 .20 .0.5 .19 .2 .18

.0 .23 .0.8 .22 .-1.5 .21

.3 .26 .0.25 .25  $-\frac{7}{19}$  .24

.108 .28 .12 .27

$$\lim_{x \rightarrow 3} \frac{x^2 - 10}{(x - 3)^2} \quad .23 \quad \lim_{x \rightarrow 2} \frac{x^2 + 3}{(x - 2)^2} \quad .22 \quad \lim_{x \rightarrow 0} \frac{1}{x} \quad .21$$

$$\lim_{x \rightarrow 6} \frac{-5}{x - 6} \quad .25 \quad \lim_{x \rightarrow 7} \frac{5}{x - 7} \quad .24 \quad \lim_{x \rightarrow 3} \frac{x^2 - 10}{(x - 3)^2} \quad .23$$

$$\lim_{x \rightarrow -3} \frac{2x + 9}{x + 3} \quad .27 \quad \lim_{x \rightarrow 1} \frac{x^2 + 3}{x - 1} \quad .26 \quad \lim_{x \rightarrow 6} \frac{-5}{x - 6} \quad .25$$

$$\lim_{x \rightarrow 4} \frac{x^2 + 5}{x^2 - 6x + 8} \quad .29 \quad \lim_{x \rightarrow 4} \frac{3x - 15}{x - 4} \quad .28$$

$$\lim_{x \rightarrow 1} \frac{1}{x - 1} - \frac{2}{x^2 - 1} \quad .31 \quad \lim_{x \rightarrow 2} \frac{x^2 - 7x}{-x^2 + 7x - 10} \quad .30$$

$$\lim_{x \rightarrow -2} \frac{1}{x + 2} + \frac{4}{x^2 - 4} \quad .32$$

תשובות:

.0.4 .4 .3 .3 .0 .2 .0 .1

$-\infty$  .10  $-\infty$  .9 .0 .8 .0 .7 .-4 .6 .-0.75 .5

$-\infty$  .16  $-\infty$  .15  $-\infty$  .14 .3 .13 .0 .12  $-\infty$  .11

$-\infty$  .20 .0.5 .19 .1 .18 .0.4 .17

$-\infty$  .23  $-\infty$  .22  $-\infty$  משמאל .21

$-\infty$  משמאל .24  $-\infty$  מימין,  $-\infty$  משמאל .25

$-\infty$  משמאל .26  $-\infty$  מימין,  $-\infty$  משמאל .27

$-\infty$  משמאל .28  $-\infty$  מימין,  $-\infty$  משמאל .29

$-\infty$  .32 .0.5 .31  $-\infty$  משמאל .30

$$\lim_{x \rightarrow \infty} \frac{2x^2 - 7x + 5}{5x^2 + 4x + 3} \quad .4 \quad \lim_{x \rightarrow \infty} \frac{3x + 7}{x - 5} \quad .3 \quad \lim_{x \rightarrow \infty} \frac{5}{x^2} \quad .2 \quad \lim_{x \rightarrow \infty} \frac{1}{x} \quad .1$$

$$\lim_{x \rightarrow \infty} \frac{8 + 3x^2 - 8x^5}{5x - 4x^3 + 2x^5} \quad .6 \quad \lim_{x \rightarrow \infty} \frac{3x^3 - 7x^2 + 5}{2x + 3x^2 - 4x^3} \quad .5$$

$$\lim_{x \rightarrow \infty} \frac{7x^2 - 9x + 8}{2x^3 + 3x^2 - 5} \quad .8 \quad \lim_{x \rightarrow \infty} \frac{3x + 7}{x^2 - 6x + 9} \quad .7$$

$$\lim_{x \rightarrow \infty} \frac{5x + 3 + 4x^4}{5x^2 + 4} \quad .10 \quad \lim_{x \rightarrow \infty} \frac{3x^2 - 8x + 7}{2x + 5} \quad .9$$

$$\lim_{x \rightarrow -\infty} \frac{3x - 7}{x^2 + 5x + 3} \quad .12 \quad \lim_{x \rightarrow \infty} \frac{2x - x^3}{7x + 8x^2} \quad .11$$

$$\lim_{x \rightarrow -\infty} \frac{5x^3 - 8x + 7}{3x^2 - 7x + 8} \quad .14 \quad \lim_{x \rightarrow -\infty} \frac{3x^2 - 7x + 8}{x^2 + 4x - 3} \quad .13$$

$$\lim_{x \rightarrow \infty} \frac{2x - \sqrt{x}}{5x + 4} \quad .17 \quad \lim_{x \rightarrow -\infty} \frac{8x^5 - 7}{2x^2 + 7} \quad .16 \quad \lim_{x \rightarrow -\infty} \frac{5x^3 - 7}{8x + 3} \quad .15$$

$$\lim_{x \rightarrow \infty} \frac{\sqrt[3]{x^3 + 7} - \sqrt{x}}{2x + 5} \quad .19 \quad \lim_{x \rightarrow \infty} \frac{\sqrt{x^2 + 1}}{x + 3} \quad .18$$

$$\lim_{x \rightarrow 0} \frac{1}{x^2} \quad .20 \quad \lim_{x \rightarrow \infty} \frac{\sqrt[3]{x^3 + 7} - \sqrt{x}}{2x + 5} \quad .19$$