

### New Exercises on Limits and undecided cases

For each of the following functions calculate the limits at the ends of each interval of their definition set and chart the results in a small chart. Indicate the asymptotes if any.

(11)  $f(x) = \frac{1+x}{1+|x|}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(12)  $f(x) = |x| + 1 + \frac{2}{x-1}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(13)  $f(x) = \sqrt{|4x^2 + 8x + 3|}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(14)  $f(x) = x + \sqrt{x^2 - 1}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(15)  $f(x) = \frac{|x|}{\sqrt{x^2 - 4}}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(16)  $f(x) = \frac{(x^2 + x - 6)\sqrt{4x^2 + 4x + 1}}{4x + 2}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(17)  $f(x) = \frac{4x}{\sqrt{x^2 + 4x + 1}}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(18)  $f(x) = \frac{x^2 + 4x}{\sqrt{|x^2 + 4x + 1|}}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(19)  $f(x) = \sqrt{\frac{1-x}{1+x}}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		

(20)  $f(x) = x \sqrt{\frac{1-x}{1+x}}$

$x$	$-\infty$	$+\infty$
<i>limits of f</i>		