

แบบฝึกหัด ลิมิต

1. จงหาลิมิตต่อไปนี้

1.1 $\lim_{x \rightarrow -7} (2x + 5)$

1.2 $\lim_{x \rightarrow 12} (10 - 3x)$

1.3 $\lim_{x \rightarrow 2} (-x^2 + 5x - 2)$

1.4 $\lim_{x \rightarrow -2} (x^3 - 2x^2 + 4x + 8)$

1.5 $\lim_{t \rightarrow 6} 8(t - 5)(t - 7)$

1.6 $\lim_{s \rightarrow 2/3} 3s(2s - 1)$

1.7 $\lim_{x \rightarrow 2} \frac{x + 3}{x + 6}$

1.8 $\lim_{x \rightarrow 5} \frac{4}{x - 7}$

1.9 $\lim_{y \rightarrow -5} \frac{y^2}{5 - y}$

1.10 $\lim_{y \rightarrow 2} \frac{y + 2}{y^2 + 5y + 6}$

1.11 $\lim_{x \rightarrow -1} 3(2x - 1)^2$

1.12 $\lim_{x \rightarrow -4} (x + 3)^{1984}$

1.13 $\lim_{y \rightarrow -3} (5 - y)^{4/3}$

1.14 $\lim_{z \rightarrow 0} (2z - 8)^{1/3}$

1.15 $\lim_{h \rightarrow 0} \frac{3}{\sqrt{3h + 1} + 1}$

1.16 $\lim_{h \rightarrow 0} \frac{5}{\sqrt{5h + 4} + 2}$

1.17 $\lim_{h \rightarrow 0} \frac{\sqrt{3h + 1} - 1}{h}$

1.18 $\lim_{h \rightarrow 0} \frac{\sqrt{5h + 4} - 2}{h}$

1.19 $\lim_{x \rightarrow 5} \frac{x - 5}{x^2 - 25}$

1.20 $\lim_{x \rightarrow -3} \frac{x + 3}{x^2 + 4x + 3}$

1.21 $\lim_{x \rightarrow -5} \frac{x^2 + 3x - 10}{x + 5}$

1.22 $\lim_{x \rightarrow 2} \frac{x^2 - 7x + 10}{x - 2}$

1.23 $\lim_{t \rightarrow 1} \frac{t^2 + t - 2}{t^2 - 1}$

1.24 $\lim_{t \rightarrow -1} \frac{t^2 + 3t + 2}{t^2 - t - 2}$

1.25 $\lim_{x \rightarrow -2} \frac{-2x - 4}{x^3 + 2x^2}$

1.26 $\lim_{y \rightarrow 0} \frac{5y^3 + 8y^2}{3y^4 - 16y^2}$

1.27 $\lim_{u \rightarrow 1} \frac{u^4 - 1}{u^3 - 1}$

1.28 $\lim_{v \rightarrow 2} \frac{v^3 - 8}{v^4 - 16}$

1.29 $\lim_{x \rightarrow 9} \frac{\sqrt{x} - 3}{x - 9}$

1.30 $\lim_{x \rightarrow 4} \frac{4x - x^2}{2 - \sqrt{x}}$

1.31 $\lim_{x \rightarrow 1} \frac{x - 1}{\sqrt{x + 3} - 2}$

1.32 $\lim_{x \rightarrow -1} \frac{\sqrt{x^2 + 8} - 3}{x + 1}$

1.33 $\lim_{x \rightarrow 2} \frac{\sqrt{x^2 + 12} - 4}{x - 2}$

1.34 $\lim_{x \rightarrow -2} \frac{x + 2}{\sqrt{x^2 + 5} - 3}$

1.35 $\lim_{x \rightarrow -3} \frac{2 - \sqrt{x^2 - 5}}{x + 3}$

1.36 $\lim_{x \rightarrow 4} \frac{4 - x}{5 - \sqrt{x^2 + 9}}$

$$1.37 \quad \lim_{x \rightarrow 2} \frac{x^2 - 4x + 4}{x^3 + 5x^2 - 14x}$$

$$1.39 \quad \lim_{x \rightarrow a} \frac{x^2 - a^2}{x^4 - a^4}$$

$$1.41 \quad \lim_{x \rightarrow 0} \frac{\frac{1}{2+x} - \frac{1}{2}}{x}$$

$$1.43 \quad \lim_{x \rightarrow 4} \frac{x^2 - 16}{x - 4}$$

$$1.45 \quad \lim_{t \rightarrow -2} \frac{t^3 + 8}{t + 2}$$

$$1.47 \quad \lim_{x \rightarrow 2} \frac{x^2 - 4x + 4}{x^2 + x - 6}$$

$$1.49 \quad \lim_{t \rightarrow 1} \frac{t^3 + t^2 - 5t + 3}{t^3 - 3t + 2}$$

$$1.51 \quad \lim_{y \rightarrow 4} \frac{4 - y}{2 - \sqrt{y}}$$

$$1.53 \quad \lim_{x \rightarrow 0} \frac{\sqrt{x^2 + 4} - 2}{x}$$

$$1.55 \quad \lim_{h \rightarrow 0} \frac{(2-h)^{-2} - 2^{-2}}{h}$$

$$1.38 \quad \lim_{x \rightarrow 1} \frac{1 - \sqrt{x}}{1 - x}$$

$$1.40 \quad \lim_{h \rightarrow 0} \frac{(x+h)^2 - x^2}{h}$$

$$1.42 \quad \lim_{x \rightarrow 0} \frac{(2+x)^3 - 8}{x}$$

$$1.44 \quad \lim_{x \rightarrow 0} \frac{6x - 9}{x^3 - 12x + 3}$$

$$1.46 \quad \lim_{x \rightarrow -1} \frac{x^2 + 6x + 5}{x^2 - 3x - 4}$$

$$1.48 \quad \lim_{t \rightarrow 2} \frac{t^3 + 3t^2 - 12t + 4}{t^3 - 4t}$$

$$1.50 \quad \lim_{x \rightarrow 9} \frac{x - 9}{\sqrt{x} - 3}$$

$$1.52 \quad \lim_{x \rightarrow 0} \frac{\sqrt{x+4} - 2}{x}$$

$$1.54 \quad \lim_{x \rightarrow -1} \sqrt[3]{\frac{x+1}{x^3+1}}$$

$$1.56 \quad \lim_{x \rightarrow 3} \frac{x-3}{2 - \sqrt[3]{3x-1}}$$

คำตอบ

1.1	-9	1.2	-26	1.3	4	1.4	-16	1.5	-8	1.6	$\frac{2}{3}$
1.7	$\frac{5}{8}$	1.8	-2	1.9	$\frac{5}{2}$	1.10	$\frac{1}{5}$	1.11	27	1.12	1
1.13	16	1.14	-2	1.15	$\frac{3}{2}$	1.16	$\frac{5}{4}$	1.17	$\frac{3}{2}$	1.18	$\frac{5}{4}$
1.19	$\frac{1}{10}$	1.20	$-\frac{1}{2}$	1.21	-7	1.22	-3	1.23	$\frac{3}{2}$	1.24	$-\frac{1}{3}$
1.25	$-\frac{1}{2}$	1.26	$-\frac{1}{2}$	1.27	$\frac{4}{3}$	1.28	$\frac{3}{8}$	1.29	$\frac{1}{6}$	1.30	16
1.31	4	1.32	$-\frac{1}{3}$	1.33	$\frac{1}{2}$	1.34	$-\frac{3}{2}$	1.35	$\frac{3}{2}$	1.36	$\frac{5}{4}$
1.37	0	1.38	$\frac{1}{2}$	1.39	$\frac{1}{2a^2}$	1.40	$2x$	1.41	$-\frac{1}{4}$	1.42	12
1.43	8	1.44	-3	1.45	12	1.46	$-\frac{4}{5}$	1.47	0	1.48	$\frac{3}{2}$
1.49	$\frac{4}{3}$	1.50	6	1.51	4	1.52	$\frac{1}{4}$	1.53	0	1.54	$\sqrt[3]{\frac{1}{3}}$
1.55	$\frac{1}{4}$	1.56	-4								