Quiz 1 :

① 4

② 1

③ 1

④ 5

⑤ 5

⑥

Interval	[.99, 1]	[.999, 1]	[.9999, 1]	[1, 1.0001]	[1, 1.001]	[1, 1.01]
Slope	.9801	.9980	.9998	1.0002	1.002	1.02

The slope of the tangent line is 1.

The limit of slope of secant lines = the slope of the tangent line
$$= 1$$

⑦

Interval	[2.99, 3]	[2.999, 3]	[2.9999, 3]	[3, 3.0001]	[3, 3.001]	[3, 3.01]
Slope	-8.351	-8.3951	-8.3995	-8.400	-8.4049	-8.449

The slope of the tangent line is -8.4.

The limit of the slopes of the secant lines is equal
to the slope of the tangent line = -8.4

⑧ $\lim\limits_{x \to 3^-} f(x) = 27$ and $\lim\limits_{x \to 3^+} f(x) = 27$

So, $\lim\limits_{x \to 3} f(x) = 27$

⑨ Answers will vary ...

⑩