

Table 19: Comparison among Qwen3-1.7B / Qwen3-0.6B (Thinking) and other reasoning baselines. The highest and second-best scores are shown in **bold** and underlined, respectively.

		DeepSeek-R1 -Distill-Qwen-1.5B	DeepSeek-R1 -Distill-Llama-8B	Qwen3-0.6B	Qwen3-1.7B
	Architecture	Dense	Dense	Dense	Dense
	# Activated Params	1.5B	8B	0.6B	1.7B
	# Total Params	1.5B	8B	0.6B	1.7B
General Tasks	MMLU-Redux	45.4	<u>66.4</u>	55.6	<b>73.9</b>
	GPQA-Diamond	33.8	<b>49.0</b>	27.9	<u>40.1</u>
	C-Eval	27.1	<u>50.4</u>	<u>50.4</u>	<b>68.1</b>
	LiveBench 2024-11-25	24.9	<u>40.6</u>	30.3	<b>51.1</b>
Alignment Tasks	IFEval strict prompt	39.9	59.0	<u>59.2</u>	<b>72.5</b>
	Arena-Hard	4.5	<u>17.6</u>	8.5	<b>43.1</b>
	AlignBench v1.1	5.00	<u>6.24</u>	6.10	<b>7.60</b>
	Creative Writing v3	16.4	<b>51.1</b>	30.6	<u>48.0</u>
	WritingBench	4.03	5.42	<u>5.61</u>	<b>7.02</b>
Math & Text Reasoning	MATH-500	83.9	<u>89.1</u>	77.6	<b>93.4</b>
	AIME'24	28.9	<b>50.4</b>	10.7	<u>48.3</u>
	AIME'25	22.8	<u>27.8</u>	15.1	<u>36.8</u>
	ZebraLogic	4.9	<u>37.1</u>	30.3	<b>63.2</b>
	AutoLogi	19.1	<u>63.4</u>	61.6	<b>83.2</b>
Agent & Coding	BFCL v3	14.0	21.5	<u>46.4</u>	<b>56.6</b>
	LiveCodeBench v5	13.2	<b>42.5</b>	12.3	<u>33.2</u>
Multilingual Tasks	Multi-IF	13.3	27.0	<u>36.1</u>	<b>51.2</b>
	INCLUDE	21.9	34.5	<u>35.9</u>	<b>51.8</b>
	MMMLU 14 languages	27.3	40.1	<u>43.1</u>	<b>59.1</b>
	MT-AIME2024	12.4	<u>13.2</u>	7.8	<b>36.1</b>
	PolyMath	<u>14.5</u>	10.8	11.4	<b>25.2</b>
	MLogiQA	29.0	32.8	<u>40.9</u>	<b>56.0</b>

Table 20: Comparison among Qwen3-1.7B / Qwen3-0.6B (Non-thinking) and other non-reasoning baselines. The highest and second-best scores are shown in **bold** and underlined, respectively.

		Gemma-3 -1B-IT	Phi-4-mini	Qwen2.5-1.5B -Instruct	Qwen2.5-3B -Instruct	Qwen3-0.6B	Qwen3-1.7B
	Architecture	Dense	Dense	Dense	Dense	Dense	Dense
	# Activated Params	1.0B	3.8B	1.5B	3.1B	0.6B	1.7B
	# Total Params	1.0B	3.8B	1.5B	3.1B	0.6B	1.7B
General Tasks	MMLU-Redux	33.3	<b>67.9</b>	50.7	<u>64.4</u>	44.6	<u>64.4</u>
	GPQA-Diamond	19.2	25.2	<u>29.8</u>	<b>30.3</b>	22.9	<u>28.6</u>
	C-Eval	28.5	40.0	53.3	<b>68.2</b>	42.6	<u>61.0</u>
	LiveBench 2024-11-25	14.4	<u>25.3</u>	18.0	23.8	21.8	<b>35.6</b>
Alignment Tasks	IFEval strict prompt	54.5	<b>68.6</b>	42.5	58.2	54.5	<u>68.2</u>
	Arena-Hard	17.8	<u>32.8</u>	9.0	23.7	6.5	<b>36.9</b>
	AlignBench v1.1	5.3	6.00	5.60	<u>6.49</u>	5.60	<b>7.20</b>
	Creative Writing v3	<b>52.8</b>	10.3	31.5	42.8	28.4	<u>43.6</u>
	WritingBench	5.18	4.05	4.67	<u>5.55</u>	5.13	<b>6.54</b>
Math & Text Reasoning	MATH-500	46.4	<u>67.6</u>	55.0	67.2	55.2	<b>73.0</b>
	AIME'24	0.9	<u>8.1</u>	0.9	6.7	3.4	<u>13.4</u>
	AIME'25	0.8	<u>5.3</u>	0.4	4.2	2.6	<u>9.8</u>
	ZebraLogic	1.9	2.7	3.4	<u>4.8</u>	4.2	<b>12.8</b>
	AutoLogi	16.4	28.8	22.5	29.9	<u>37.4</u>	<b>59.8</b>
Agent & Coding	BFCL v3	16.3	31.3	47.8	<u>50.4</u>	44.1	<b>52.2</b>
	LiveCodeBench v5	1.8	<u>10.4</u>	5.3	9.2	3.6	<b>11.6</b>
Multilingual Tasks	Multi-IF	32.8	<u>40.5</u>	20.2	32.3	33.3	<b>44.7</b>
	INCLUDE	32.7	<b>43.8</b>	33.1	<u>43.8</u>	34.4	<u>42.6</u>
	MMMLU 14 languages	32.5	<u>51.4</u>	40.4	<b>51.8</b>	37.1	<u>48.3</u>
	MT-AIME2024	0.2	0.9	0.7	<u>1.6</u>	1.5	<u>4.9</u>
	PolyMath	3.5	6.7	5.0	<u>7.3</u>	4.6	<b>10.3</b>
	MLogiQA	31.8	39.5	<u>40.9</u>	39.5	37.3	<b>41.1</b>