

Table 17: Comparison among Qwen3-8B / Qwen3-4B (Thinking) and other reasoning baselines. The highest and second-best scores are shown in bold and underlined, respectively.

		DeepSeek-R1 -Distill-Qwen-14B	DeepSeek-R1 -Distill-Qwen-32B	Qwen3-4B	Qwen3-8B
	Architecture	Dense	Dense	Dense	Dense
	# Activated Params	14B	32B	4B	8B
	# Total Params	14B	32B	4B	8B
General Tasks	MMLU-Redux	84.1	<b>88.2</b>	83.7	<u>87.5</u>
	GPQA-Diamond	59.1	<b>62.1</b>	55.9	<u>62.0</u>
	C-Eval	78.1	<u>82.2</u>	77.5	<b>83.4</b>
	LiveBench 2024-11-25	52.3	45.6	<u>63.6</u>	<b>67.1</b>
Alignment Tasks	IFEval strict prompt	72.6	72.5	<u>81.9</u>	<b>85.0</b>
	Arena-Hard	48.0	60.8	<u>76.6</u>	<b>85.8</b>
	AlignBench v1.1	7.43	7.25	<u>8.30</u>	<b>8.46</b>
	Creative Writing v3	54.2	55.0	<u>61.1</u>	<b>75.0</b>
	WritingBench	6.03	6.13	<u>7.35</u>	<b>7.59</b>
Math & Text Reasoning	MATH-500	93.9	94.3	<u>97.0</u>	<b>97.4</b>
	AIME'24	69.7	72.6	<u>73.8</u>	<b>76.0</b>
	AIME'25	44.5	49.6	<u>65.6</u>	<b>67.3</b>
	ZebraLogic	59.1	69.6	<u>81.0</u>	<b>84.8</b>
	AutoLogi	78.6	74.6	<u>87.9</u>	<b>89.1</b>
Agent & Coding	BFCL v3	49.5	53.5	<u>65.9</u>	<b>68.1</b>
	LiveCodeBench v5	45.5	<u>54.5</u>	<u>54.2</u>	<b>57.5</b>
	CodeForces (Rating / Percentile)	1574 / 89.1%	<u>1691 / 93.4%</u>	1671 / 92.8%	<b>1785 / 95.6%</b>
Multilingual Tasks	Multi-IF	29.8	31.3	<u>66.3</u>	<b>71.2</b>
	INCLUDE	59.7	<b>68.0</b>	61.8	<u>67.8</u>
	MMMLU 14 languages	73.8	<b>78.6</b>	69.8	<u>74.4</u>
	MT-AIME2024	33.7	44.6	<u>60.7</u>	<b>65.4</b>
	PolyMath	28.6	35.1	<u>40.0</u>	<b>42.7</b>
	MLogiQA	53.6	63.3	<u>65.9</u>	<b>69.0</b>

Table 18: Comparison among Qwen3-8B / Qwen3-4B (Non-thinking) and other non-reasoning baselines. The highest and second-best scores are shown in bold and underlined, respectively.

		LLaMA-3.1-8B -Instruct	Gemma-3 -12B-IT	Qwen2.5-7B -Instruct	Qwen2.5-14B -Instruct	Qwen3-4B	Qwen3-8B
	Architecture	Dense	Dense	Dense	Dense	Dense	Dense
	# Activated Params	8B	12B	7B	14B	4B	8B
	# Total Params	8B	12B	7B	14B	4B	8B
General Tasks	MMLU-Redux	61.7	77.8	75.4	<b>80.0</b>	77.3	<u>79.5</u>
	GPQA-Diamond	32.8	40.9	36.4	<b>45.5</b>	41.7	39.3
	C-Eval	52.0	61.1	76.2	<b>78.0</b>	72.2	<u>77.9</u>
	LiveBench 2024-11-25	26.0	43.7	34.9	42.2	<u>48.4</u>	<b>53.5</b>
Alignment Tasks	IFEval strict prompt	75.0	80.2	71.2	81.0	<u>81.2</u>	<b>83.0</b>
	Arena-Hard	30.1	<b>82.6</b>	52.0	68.3	66.2	<u>79.6</u>
	AlignBench v1.1	6.01	7.77	7.27	7.67	<u>8.10</u>	<b>8.38</b>
	Creative Writing v3	52.8	<b>79.9</b>	49.8	55.8	53.6	<u>64.5</u>
	WritingBench	4.57	<u>7.05</u>	5.82	5.93	6.85	<b>7.15</b>
Math & Text Reasoning	MATH-500	54.8	<u>85.6</u>	77.6	83.4	84.8	<b>87.4</b>
	AIME'24	6.3	22.4	9.1	15.2	<u>25.0</u>	<b>29.1</b>
	AIME'25	2.7	18.8	12.1	13.6	<u>19.1</u>	<b>20.9</b>
	ZebraLogic	12.8	17.8	12.0	19.7	<b>35.2</b>	26.7
	AutoLogi	30.9	58.9	42.9	57.4	<u>76.3</u>	<b>76.5</b>
Agent & Coding	BFCL v3	49.6	50.6	55.8	<u>58.7</u>	57.6	<b>60.2</b>
	LiveCodeBench v5	10.8	<b>25.7</b>	14.4	21.9	21.3	<u>22.8</u>
	CodeForces (Rating / Percentile)	473 / 14.9%	462 / 14.7%	191 / 0.0%	<u>904 / 38.3%</u>	842 / 33.7%	<b>1110 / 52.4%</b>
Multilingual Tasks	Multi-IF	52.1	<u>65.6</u>	47.7	55.5	61.3	<b>69.2</b>
	INCLUDE	34.0	<b>65.3</b>	53.6	<u>63.5</u>	53.8	62.5
	MMMLU 14 languages	44.4	<u>70.0</u>	61.4	<b>70.3</b>	61.7	66.9
	MT-AIME2024	0.4	<b>16.7</b>	5.5	8.5	13.9	16.6
	PolyMath	5.8	<u>17.6</u>	11.9	15.0	16.6	<b>18.8</b>
	MLogiQA	41.9	<b>54.5</b>	49.5	51.3	49.9	<u>51.4</u>