

# 1 fb15k Evaluation

## 1.1 fb15k Average

### 1.1.1 fb15k Average Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>complex</b>	$10.06 \pm 0.42$	$20.82 \pm 0.67$	$27.59 \pm 0.94$	$38.03 \pm 1.02$
<b>conve</b>	$48.28 \pm 0.12$	$66.99 \pm 0.04$	$73.27 \pm 0.03$	$79.76 \pm 0.07$
<b>distmult</b>	$16.45 \pm 0.16$	$29.10 \pm 0.17$	$35.54 \pm 0.21$	$45.00 \pm 0.25$
<b>hole</b>	$21.79 \pm 0.19$	$39.69 \pm 0.24$	$48.06 \pm 0.30$	$58.84 \pm 0.28$
<b>kg2e</b>	$0.11 \pm 0.04$	$0.36 \pm 0.08$	$0.56 \pm 0.10$	$1.01 \pm 0.14$
<b>rotate</b>	$41.53 \pm 0.06$	$64.14 \pm 0.07$	$71.23 \pm 0.05$	$78.67 \pm 0.08$
<b>simple</b>	$0.01 \pm 0.00$	$0.03 \pm 0.00$	$0.04 \pm 0.00$	$0.06 \pm 0.01$
<b>transd</b>	$21.22 \pm 0.03$	$40.48 \pm 0.10$	$48.57 \pm 0.09$	$58.71 \pm 0.14$
<b>transe</b>	$15.23 \pm 0.16$	$29.85 \pm 0.24$	$37.18 \pm 0.24$	$47.34 \pm 0.18$
<b>transh</b>	$1.69 \pm 0.25$	$2.95 \pm 0.20$	$3.29 \pm 0.22$	$3.74 \pm 0.18$
<b>transr</b>	$0.37 \pm 0.00$	$0.63 \pm 0.04$	$0.78 \pm 0.06$	$1.03 \pm 0.07$
<b>tucker</b>	$0.01 \pm 0.00$	$0.02 \pm 0.00$	$0.03 \pm 0.01$	$0.15 \pm 0.17$

### 1.1.2 fb15k Average Mean Ranks

	MR	MRR	AMR
<b>complex</b>	$171.16 \pm 16.05$	$19.13 \pm 0.45$	$2.46 \pm 0.28$
<b>conve</b>	$50.76 \pm 0.40$	$59.56 \pm 0.06$	$0.73 \pm 0.01$
<b>distmult</b>	$134.02 \pm 1.98$	$26.06 \pm 0.17$	$1.86 \pm 0.03$
<b>hole</b>	$193.03 \pm 7.61$	$34.15 \pm 0.22$	$2.71 \pm 0.12$
<b>kg2e</b>	$5779.07 \pm 51.02$	$0.58 \pm 0.07$	$78.40 \pm 0.68$
<b>rotate</b>	$42.28 \pm 0.13$	$55.00 \pm 0.06$	$0.63 \pm 0.00$
<b>simple</b>	$7395.75 \pm 2.02$	$0.04 \pm 0.00$	$100.02 \pm 0.03$
<b>transd</b>	$153.37 \pm 5.35$	$33.99 \pm 0.03$	$2.29 \pm 0.09$
<b>transe</b>	$127.92 \pm 0.86$	$26.01 \pm 0.17$	$1.78 \pm 0.01$
<b>transh</b>	$6320.02 \pm 30.37$	$2.54 \pm 0.20$	$85.63 \pm 0.40$
<b>transr</b>	$6795.95 \pm 16.65$	$0.65 \pm 0.02$	$91.99 \pm 0.22$
<b>tucker</b>	$7327.77 \pm 29.22$	$0.07 \pm 0.02$	$99.11 \pm 0.39$

## 1.2 fb15k Best

### 1.2.1 fb15k Best Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>complex</b>	10.06 $\pm$ 0.42	20.82 $\pm$ 0.67	27.59 $\pm$ 0.94	38.03 $\pm$ 1.02
<b>conve</b>	48.28 $\pm$ 0.12	66.99 $\pm$ 0.04	73.27 $\pm$ 0.03	79.76 $\pm$ 0.07
<b>distmult</b>	16.45 $\pm$ 0.16	29.10 $\pm$ 0.17	35.54 $\pm$ 0.21	45.00 $\pm$ 0.25
<b>hole</b>	21.79 $\pm$ 0.19	39.69 $\pm$ 0.24	48.06 $\pm$ 0.30	58.84 $\pm$ 0.28
<b>kg2e</b>	0.11 $\pm$ 0.04	0.36 $\pm$ 0.08	0.56 $\pm$ 0.10	1.01 $\pm$ 0.14
<b>rotate</b>	41.53 $\pm$ 0.06	64.14 $\pm$ 0.07	71.23 $\pm$ 0.05	78.67 $\pm$ 0.08
<b>simple</b>	11.58 $\pm$ 6.42	24.16 $\pm$ 10.95	34.73 $\pm$ 13.40	54.28 $\pm$ 15.80
<b>transd</b>	21.22 $\pm$ 0.03	40.48 $\pm$ 0.10	48.57 $\pm$ 0.09	58.71 $\pm$ 0.14
<b>transe</b>	15.23 $\pm$ 0.16	29.85 $\pm$ 0.24	37.18 $\pm$ 0.24	47.34 $\pm$ 0.18
<b>transh</b>	1.69 $\pm$ 0.25	2.95 $\pm$ 0.20	3.29 $\pm$ 0.22	3.74 $\pm$ 0.18
<b>transr</b>	0.37 $\pm$ 0.00	0.63 $\pm$ 0.04	0.78 $\pm$ 0.06	1.03 $\pm$ 0.07
<b>tucker</b>	0.01 $\pm$ 0.00	0.02 $\pm$ 0.00	0.03 $\pm$ 0.01	0.15 $\pm$ 0.17

### 1.2.2 fb15k Best Mean Ranks

	MR	MRR
<b>complex</b>	171.16 $\pm$ 16.05	19.13 $\pm$ 0.45
<b>conve</b>	50.76 $\pm$ 0.40	59.56 $\pm$ 0.06
<b>distmult</b>	134.02 $\pm$ 1.98	26.06 $\pm$ 0.17
<b>hole</b>	193.03 $\pm$ 7.61	34.15 $\pm$ 0.22
<b>kg2e</b>	5779.07 $\pm$ 51.02	0.58 $\pm$ 0.07
<b>rotate</b>	42.28 $\pm$ 0.13	55.00 $\pm$ 0.06
<b>simple</b>	139.34 $\pm$ 49.45	23.90 $\pm$ 8.79
<b>transd</b>	153.37 $\pm$ 5.35	33.99 $\pm$ 0.03
<b>transe</b>	127.92 $\pm$ 0.86	26.01 $\pm$ 0.17
<b>transh</b>	6320.00 $\pm$ 30.37	2.54 $\pm$ 0.20
<b>transr</b>	6795.94 $\pm$ 16.65	0.65 $\pm$ 0.02
<b>tucker</b>	7327.77 $\pm$ 29.22	0.07 $\pm$ 0.02

### 1.3 fb15k Worst

#### 1.3.1 fb15k Worst Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>complex</b>	$10.06 \pm 0.42$	$20.82 \pm 0.67$	$27.59 \pm 0.94$	$38.03 \pm 1.02$
<b>conve</b>	$48.28 \pm 0.12$	$66.99 \pm 0.04$	$73.27 \pm 0.03$	$79.76 \pm 0.07$
<b>distmult</b>	$16.45 \pm 0.16$	$29.10 \pm 0.17$	$35.54 \pm 0.21$	$45.00 \pm 0.25$
<b>hole</b>	$21.79 \pm 0.19$	$39.69 \pm 0.24$	$48.06 \pm 0.30$	$58.84 \pm 0.28$
<b>kg2e</b>	$0.11 \pm 0.04$	$0.36 \pm 0.08$	$0.56 \pm 0.10$	$1.01 \pm 0.14$
<b>rotate</b>	$41.53 \pm 0.06$	$64.14 \pm 0.07$	$71.23 \pm 0.05$	$78.67 \pm 0.08$
<b>simple</b>	$0.01 \pm 0.00$	$0.03 \pm 0.00$	$0.04 \pm 0.00$	$0.06 \pm 0.01$
<b>transd</b>	$21.22 \pm 0.03$	$40.48 \pm 0.10$	$48.57 \pm 0.09$	$58.71 \pm 0.14$
<b>transe</b>	$15.23 \pm 0.16$	$29.85 \pm 0.24$	$37.18 \pm 0.24$	$47.34 \pm 0.18$
<b>transh</b>	$1.69 \pm 0.25$	$2.95 \pm 0.20$	$3.29 \pm 0.22$	$3.74 \pm 0.18$
<b>transr</b>	$0.37 \pm 0.00$	$0.63 \pm 0.04$	$0.78 \pm 0.06$	$1.03 \pm 0.07$
<b>tucker</b>	$0.01 \pm 0.00$	$0.02 \pm 0.00$	$0.03 \pm 0.01$	$0.15 \pm 0.17$

#### 1.3.2 fb15k Worst Mean Ranks

	MR	MRR
<b>complex</b>	$171.16 \pm 16.05$	$19.13 \pm 0.45$
<b>conve</b>	$50.76 \pm 0.40$	$59.56 \pm 0.06$
<b>distmult</b>	$134.02 \pm 1.98$	$26.06 \pm 0.17$
<b>hole</b>	$193.03 \pm 7.61$	$34.15 \pm 0.22$
<b>kg2e</b>	$5779.07 \pm 51.02$	$0.58 \pm 0.07$
<b>rotate</b>	$42.28 \pm 0.13$	$55.00 \pm 0.06$
<b>simple</b>	$14652.16 \pm 45.71$	$0.03 \pm 0.00$
<b>transd</b>	$153.37 \pm 5.35$	$33.99 \pm 0.03$
<b>transe</b>	$127.92 \pm 0.86$	$26.01 \pm 0.17$
<b>transh</b>	$6320.05 \pm 30.37$	$2.54 \pm 0.20$
<b>transr</b>	$6795.95 \pm 16.65$	$0.65 \pm 0.02$
<b>tucker</b>	$7327.77 \pm 29.22$	$0.07 \pm 0.02$

## 2 fb15k237 Evaluation

### 2.1 fb15k237 Average

#### 2.1.1 fb15k237 Average Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>conve</b>	$18.22 \pm 0.11$	$29.51 \pm 0.24$	$35.98 \pm 0.16$	$44.95 \pm 0.17$
<b>convkb</b>	$3.31 \pm 0.23$	$4.04 \pm 0.19$	$4.57 \pm 0.22$	$7.76 \pm 0.88$
<b>rotate</b>	$17.57 \pm 0.06$	$28.97 \pm 0.05$	$35.29 \pm 0.09$	$44.55 \pm 0.06$

### 2.1.2 fb15k237 Average Mean Ranks

	MR	MRR	AMR
<b>conve</b>	$255.46 \pm 6.16$	$26.93 \pm 0.11$	$3.73 \pm 0.13$
<b>convkb</b>	$4345.27 \pm 46.99$	$4.71 \pm 0.23$	$61.36 \pm 0.65$
<b>rotate</b>	$191.92 \pm 0.31$	$26.42 \pm 0.04$	$2.84 \pm 0.00$

## 2.2 fb15k237 Best

### 2.2.1 fb15k237 Best Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>conve</b>	$18.22 \pm 0.11$	$29.51 \pm 0.24$	$35.98 \pm 0.16$	$44.95 \pm 0.17$
<b>convkb</b>	$3.31 \pm 0.23$	$4.04 \pm 0.19$	$4.57 \pm 0.22$	$7.76 \pm 0.88$
<b>rotate</b>	$17.57 \pm 0.06$	$28.97 \pm 0.05$	$35.29 \pm 0.09$	$44.55 \pm 0.06$

### 2.2.2 fb15k237 Best Mean Ranks

	MR	MRR
<b>conve</b>	$255.46 \pm 6.16$	$26.93 \pm 0.11$
<b>convkb</b>	$4345.27 \pm 46.99$	$4.71 \pm 0.23$
<b>rotate</b>	$191.92 \pm 0.31$	$26.42 \pm 0.04$

## 2.3 fb15k237 Worst

### 2.3.1 fb15k237 Worst Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>conve</b>	$18.22 \pm 0.11$	$29.51 \pm 0.24$	$35.98 \pm 0.16$	$44.95 \pm 0.17$
<b>convkb</b>	$3.31 \pm 0.23$	$4.04 \pm 0.19$	$4.57 \pm 0.22$	$7.76 \pm 0.88$
<b>rotate</b>	$17.57 \pm 0.06$	$28.97 \pm 0.05$	$35.29 \pm 0.09$	$44.55 \pm 0.06$

### 2.3.2 fb15k237 Worst Mean Ranks

	MR	MRR
<b>conve</b>	$255.46 \pm 6.16$	$26.93 \pm 0.11$
<b>convkb</b>	$4345.27 \pm 46.99$	$4.71 \pm 0.23$
<b>rotate</b>	$191.92 \pm 0.31$	$26.42 \pm 0.04$

### 3 wn18 Evaluation

#### 3.1 wn18 Average

##### 3.1.1 wn18 Average Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>complex</b>	$12.36 \pm 1.96$	$20.66 \pm 2.75$	$25.24 \pm 3.33$	$32.92 \pm 4.40$
<b>conve</b>	$85.14 \pm 0.10$	$91.76 \pm 0.11$	$93.29 \pm 0.04$	$94.85 \pm 0.06$
<b>distmult</b>	$67.45 \pm 0.34$	$85.94 \pm 0.21$	$89.52 \pm 0.25$	$92.72 \pm 0.18$
<b>hole</b>	$59.29 \pm 0.53$	$79.29 \pm 0.47$	$84.12 \pm 0.36$	$88.61 \pm 0.42$
<b>kg2e</b>	$1.35 \pm 0.22$	$3.21 \pm 0.31$	$4.57 \pm 0.34$	$7.02 \pm 0.43$
<b>rotate</b>	$82.17 \pm 0.20$	$91.53 \pm 0.12$	$93.44 \pm 0.07$	$95.28 \pm 0.08$
<b>simple</b>	$0.01 \pm 0.01$	$0.03 \pm 0.00$	$0.04 \pm 0.01$	$0.07 \pm 0.03$
<b>transd</b>	$3.94 \pm 0.27$	$65.63 \pm 0.55$	$79.64 \pm 0.43$	$87.27 \pm 0.41$
<b>transe</b>	$9.99 \pm 1.82$	$64.74 \pm 0.91$	$75.44 \pm 0.48$	$84.25 \pm 0.33$
<b>transh</b>	$0.04 \pm 0.02$	$0.19 \pm 0.10$	$0.29 \pm 0.14$	$0.39 \pm 0.11$
<b>transr</b>	$0.00 \pm 0.00$	$0.04 \pm 0.02$	$0.05 \pm 0.03$	$0.11 \pm 0.06$
<b>tucker</b>	$0.00 \pm 0.00$	$0.02 \pm 0.01$	$0.03 \pm 0.03$	$0.04 \pm 0.03$

##### 3.1.2 wn18 Average Mean Ranks

	MR	MRR	AMR
<b>complex</b>	$452.67 \pm 63.05$	$19.49 \pm 2.55$	$2.21 \pm 0.31$
<b>conve</b>	$444.40 \pm 14.82$	$88.81 \pm 0.09$	$2.17 \pm 0.07$
<b>distmult</b>	$458.64 \pm 23.96$	$77.44 \pm 0.22$	$2.24 \pm 0.12$
<b>hole</b>	$812.64 \pm 28.33$	$70.44 \pm 0.45$	$3.97 \pm 0.14$
<b>kg2e</b>	$2708.89 \pm 44.57$	$3.61 \pm 0.26$	$13.25 \pm 0.22$
<b>rotate</b>	$123.68 \pm 1.71$	$87.29 \pm 0.12$	$0.61 \pm 0.01$
<b>simple</b>	$20376.43 \pm 42.30$	$0.04 \pm 0.01$	$99.57 \pm 0.21$
<b>transd</b>	$444.39 \pm 25.61$	$36.22 \pm 0.12$	$2.17 \pm 0.13$
<b>transe</b>	$468.24 \pm 13.64$	$39.19 \pm 1.21$	$2.29 \pm 0.07$
<b>transh</b>	$19678.04 \pm 18.92$	$0.18 \pm 0.04$	$96.16 \pm 0.09$
<b>transr</b>	$19686.49 \pm 100.97$	$0.06 \pm 0.02$	$96.20 \pm 0.49$
<b>tucker</b>	$20622.46 \pm 153.52$	$0.03 \pm 0.01$	$100.78 \pm 0.75$

## 3.2 wn18 Best

### 3.2.1 wn18 Best Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>complex</b>	12.36 $\pm$ 1.96	20.66 $\pm$ 2.75	25.24 $\pm$ 3.33	32.92 $\pm$ 4.40
<b>conve</b>	85.14 $\pm$ 0.10	91.76 $\pm$ 0.11	93.29 $\pm$ 0.04	94.85 $\pm$ 0.06
<b>distmult</b>	67.45 $\pm$ 0.34	85.94 $\pm$ 0.21	89.52 $\pm$ 0.25	92.72 $\pm$ 0.18
<b>hole</b>	59.29 $\pm$ 0.53	79.29 $\pm$ 0.47	84.12 $\pm$ 0.36	88.61 $\pm$ 0.42
<b>kg2e</b>	1.35 $\pm$ 0.22	3.21 $\pm$ 0.31	4.57 $\pm$ 0.34	7.02 $\pm$ 0.43
<b>rotate</b>	82.17 $\pm$ 0.20	91.53 $\pm$ 0.12	93.44 $\pm$ 0.07	95.28 $\pm$ 0.08
<b>simple</b>	33.93 $\pm$ 4.32	39.59 $\pm$ 4.67	42.76 $\pm$ 3.73	47.01 $\pm$ 2.66
<b>transd</b>	3.94 $\pm$ 0.27	65.63 $\pm$ 0.55	79.64 $\pm$ 0.43	87.27 $\pm$ 0.41
<b>transe</b>	9.99 $\pm$ 1.82	64.74 $\pm$ 0.91	75.44 $\pm$ 0.48	84.25 $\pm$ 0.33
<b>transh</b>	0.04 $\pm$ 0.02	0.19 $\pm$ 0.10	0.29 $\pm$ 0.14	0.39 $\pm$ 0.11
<b>transr</b>	0.00 $\pm$ 0.00	0.04 $\pm$ 0.02	0.05 $\pm$ 0.03	0.11 $\pm$ 0.06
<b>tucker</b>	0.00 $\pm$ 0.00	0.02 $\pm$ 0.01	0.03 $\pm$ 0.03	0.04 $\pm$ 0.03

### 3.2.2 wn18 Best Mean Ranks

	MR	MRR
<b>complex</b>	452.67 $\pm$ 63.05	19.49 $\pm$ 2.55
<b>conve</b>	444.40 $\pm$ 14.82	88.81 $\pm$ 0.09
<b>distmult</b>	458.64 $\pm$ 23.96	77.44 $\pm$ 0.22
<b>hole</b>	812.63 $\pm$ 28.33	70.44 $\pm$ 0.45
<b>kg2e</b>	2708.88 $\pm$ 44.57	3.61 $\pm$ 0.26
<b>rotate</b>	123.68 $\pm$ 1.71	87.29 $\pm$ 0.12
<b>simple</b>	384.53 $\pm$ 66.45	38.48 $\pm$ 4.00
<b>transd</b>	444.39 $\pm$ 25.61	36.22 $\pm$ 0.12
<b>transe</b>	468.24 $\pm$ 13.64	39.19 $\pm$ 1.21
<b>transh</b>	19678.02 $\pm$ 18.92	0.18 $\pm$ 0.04
<b>transr</b>	19686.49 $\pm$ 100.97	0.06 $\pm$ 0.02
<b>tucker</b>	20622.46 $\pm$ 153.52	0.03 $\pm$ 0.01

### 3.3 wn18 Worst

#### 3.3.1 wn18 Worst Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>complex</b>	12.36 $\pm$ 1.96	20.66 $\pm$ 2.75	25.24 $\pm$ 3.33	32.92 $\pm$ 4.40
<b>conve</b>	85.14 $\pm$ 0.10	91.76 $\pm$ 0.11	93.29 $\pm$ 0.04	94.85 $\pm$ 0.06
<b>distmult</b>	67.45 $\pm$ 0.34	85.94 $\pm$ 0.21	89.52 $\pm$ 0.25	92.72 $\pm$ 0.18
<b>hole</b>	59.29 $\pm$ 0.53	79.29 $\pm$ 0.47	84.12 $\pm$ 0.36	88.61 $\pm$ 0.42
<b>kg2e</b>	1.35 $\pm$ 0.22	3.21 $\pm$ 0.31	4.57 $\pm$ 0.34	7.02 $\pm$ 0.43
<b>rotate</b>	82.17 $\pm$ 0.20	91.53 $\pm$ 0.12	93.44 $\pm$ 0.07	95.28 $\pm$ 0.08
<b>simple</b>	0.01 $\pm$ 0.01	0.03 $\pm$ 0.00	0.04 $\pm$ 0.01	0.07 $\pm$ 0.03
<b>transd</b>	3.94 $\pm$ 0.27	65.63 $\pm$ 0.55	79.64 $\pm$ 0.43	87.27 $\pm$ 0.41
<b>transe</b>	9.99 $\pm$ 1.82	64.74 $\pm$ 0.91	75.44 $\pm$ 0.48	84.25 $\pm$ 0.33
<b>transh</b>	0.04 $\pm$ 0.02	0.19 $\pm$ 0.10	0.29 $\pm$ 0.14	0.39 $\pm$ 0.11
<b>transr</b>	0.00 $\pm$ 0.00	0.04 $\pm$ 0.02	0.05 $\pm$ 0.03	0.11 $\pm$ 0.06
<b>tucker</b>	0.00 $\pm$ 0.00	0.02 $\pm$ 0.01	0.03 $\pm$ 0.03	0.04 $\pm$ 0.03

#### 3.3.2 wn18 Worst Mean Ranks

	MR	MRR
<b>complex</b>	452.67 $\pm$ 63.05	19.49 $\pm$ 2.55
<b>conve</b>	444.40 $\pm$ 14.82	88.81 $\pm$ 0.09
<b>distmult</b>	458.64 $\pm$ 23.96	77.44 $\pm$ 0.22
<b>hole</b>	812.64 $\pm$ 28.34	70.44 $\pm$ 0.45
<b>kg2e</b>	2708.89 $\pm$ 44.57	3.61 $\pm$ 0.26
<b>rotate</b>	123.68 $\pm$ 1.71	87.29 $\pm$ 0.12
<b>simple</b>	40368.33 $\pm$ 114.95	0.03 $\pm$ 0.01
<b>transd</b>	444.39 $\pm$ 25.61	36.22 $\pm$ 0.12
<b>transe</b>	468.24 $\pm$ 13.64	39.19 $\pm$ 1.21
<b>transh</b>	19678.06 $\pm$ 18.92	0.18 $\pm$ 0.04
<b>transr</b>	19686.50 $\pm$ 100.97	0.06 $\pm$ 0.02
<b>tucker</b>	20622.46 $\pm$ 153.52	0.03 $\pm$ 0.01

## 4 wn18rr Evaluation

### 4.1 wn18rr Average

#### 4.1.1 wn18rr Average Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>conve</b>	40.98 $\pm$ 0.22	46.49 $\pm$ 0.14	48.92 $\pm$ 0.23	51.76 $\pm$ 0.13
<b>convkb</b>	0.09 $\pm$ 0.03	0.21 $\pm$ 0.07	0.32 $\pm$ 0.10	0.57 $\pm$ 0.16
<b>rotate</b>	44.02 $\pm$ 0.15	50.55 $\pm$ 0.12	52.98 $\pm$ 0.11	56.51 $\pm$ 0.26

#### 4.1.2 wn18rr Average Mean Ranks

	MR	MRR	AMR
<b>conve</b>	$5369.49 \pm 50.92$	$44.69 \pm 0.21$	$26.49 \pm 0.25$
<b>convkb</b>	$13634.66 \pm 714.24$	$0.30 \pm 0.07$	$67.27 \pm 3.52$
<b>rotate</b>	$4263.32 \pm 90.33$	$48.40 \pm 0.09$	$21.03 \pm 0.45$

### 4.2 wn18rr Best

#### 4.2.1 wn18rr Best Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>conve</b>	$40.98 \pm 0.22$	$46.49 \pm 0.14$	$48.92 \pm 0.23$	$51.76 \pm 0.13$
<b>convkb</b>	$0.09 \pm 0.03$	$0.21 \pm 0.07$	$0.32 \pm 0.10$	$0.57 \pm 0.16$
<b>rotate</b>	$44.02 \pm 0.15$	$50.55 \pm 0.12$	$52.98 \pm 0.11$	$56.51 \pm 0.26$

#### 4.2.2 wn18rr Best Mean Ranks

	MR	MRR
<b>conve</b>	$5369.49 \pm 50.92$	$44.69 \pm 0.21$
<b>convkb</b>	$13634.65 \pm 714.24$	$0.30 \pm 0.07$
<b>rotate</b>	$4263.32 \pm 90.33$	$48.40 \pm 0.09$

### 4.3 wn18rr Worst

#### 4.3.1 wn18rr Worst Hits@K

	hits@1	hits@3	hits@5	hits@10
<b>conve</b>	$40.98 \pm 0.22$	$46.49 \pm 0.14$	$48.92 \pm 0.23$	$51.76 \pm 0.13$
<b>convkb</b>	$0.09 \pm 0.03$	$0.21 \pm 0.07$	$0.32 \pm 0.10$	$0.57 \pm 0.16$
<b>rotate</b>	$44.02 \pm 0.15$	$50.55 \pm 0.12$	$52.98 \pm 0.11$	$56.51 \pm 0.26$

#### 4.3.2 wn18rr Worst Mean Ranks

	MR	MRR
<b>conve</b>	$5369.49 \pm 50.92$	$44.69 \pm 0.21$
<b>convkb</b>	$13634.66 \pm 714.24$	$0.30 \pm 0.07$
<b>rotate</b>	$4263.32 \pm 90.33$	$48.40 \pm 0.09$