

1 Appendix

1.1 80/20 split

The 80/20 split mentioned in the body of the paper refers to the fact that for general tasks, unless otherwise specified, we generated 10,000 scenarios according to the training regime above specified, and then took a random sample of 80% of those scenarios and placed them in a training set, and placed the remaining, unsampled scenarios into a validation set. Thus, training sets and validation sets cover the same structural domain unless some other validation regime is specified.

1.2 Examples of Object Name Lists

In table 1, we provide more examples of each of the lists of candidates referenced in Section 4.

Table 1:

List Name	Examples
All Train Nouns	pockets, hallelujah, cooktop, sunglasses, nonaction ...
2000 Common Train Nouns	people, time, way, man, world, year, thing, president...
20 Concrete Train Nouns	strawberry, horseshoe, sardine, passport, grape, oat ...
200 Concrete Train Nouns	escalator, strawberry, bathrobe, hubcap, greyhound ...
2000 Concrete Train Nouns	tongs, saxophone, umbrella, strawberry, bathrobe ...
2000 Train Nouns	flubs, dependant, sentimentalists, liberalizations ...
All Validation Nouns	injuries, yellowtail, electromagnetism, fussiness ...
2000 Concrete Validation Nouns	watchband, flashlight, tractor, handkerchief, camera ...
2000 Common Validation Nouns	life, day, state, family, place, city, times, number ...
Verbs	talk shop, whip up, uncrate, sleep late, speculate ...
To Verbs	to talk shop, to whip up, to uncrate, to sleep late ...
Random Strings	cbmmj3a, 27qu9nrcfv, u8njdfg7, 5g4gnzv7m, n6lnl ...

1.3 More Examples of Task Range

Here we include examples both on the more difficult and easier ends of the task domain.

Table 2:

Task Name	Prefix	Target
Containers Short	The bin contains a backbeats. The bag contains an electrics. Took an electrics from the bag and put it into the bin.	The bin contains a backbeats and an electrics. The bag contains no objects.
Containers Long	The bowl contains a cormorant, a rewritings, and a lodger. The case contains a consortia and an appendices. The bag contains an orishas, a creamers, a guv, and a steamroller. The tub contains a wont, a steers, an inception, a simians, an assimilation, and a scrapple. The jar contains a walk-outs, a gentleness, a rhetoric, and a preserves. Took an appendices from the case and put it into the bowl.	The bowl contains a cormorant, a rewritings, a lodger, and an appendices. The case contains a consortia. The bag contains an orishas, a creamers, a guv, and a steamroller. The tub contains a wont, a steers, an inception, a simians, an assimilation, and a scrapple. The jar contains a walk-outs, a gentleness, a rhetoric, and a preserves.
Navigation Short	The foyer is to the west of the living room. The antechamber is to the south of the living room. To get from the antechamber to the living room, you must go	to the north.
Navigation Long	The kitchen is to the south of the family room. The basement is to the west of the kitchen. The great room is to the north of the basement. The antechamber is to the north of the great room. The conservatory is to the north of the family room. The storeroom is to the west of the great room. To get from the family room to the storeroom, you must go	to the south, then to the west, then to the north, then to the west.
Navigation Result Short	The laundry room is to the east of the great room. The den is to the east of the laundry room. If you start in the laundry room and go to the west, you will end in the	great room

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Task Name	Prefix	Target
Navigation Result Long	The mud room is to the south of the boiler room. The screen porch is to the west of the boiler room. The study is to the south of the mud room. The utility room is to the west of the study. The cloakroom is to the north of the mud room. The family room is to the west of the screen porch. The tea room is to the south of the cloakroom. If you start in the family room and go to the east twice, then to the south, then to the north, then to the south, you will end in the	tea room
Hard Object / Composite	The loft is to the west of the family room. The powder room is to the east of the family room. The sitting room is to the north of the loft. The garage is to the east of the loft. The study is to the east of the sitting room. The nursery is to the east of the study. There is a container in the nursery containing a book. There is a carton in the garage containing a mushroom, and a celery. Took a book from the container in the nursery. Went to the west twice, then to the south, then to the east. Placed it.	There is a container in the nursery containing nothing. There is a carton in the garage containing a mushroom, a celery, and a book.

1.4 Examples of Matches and Failures

Table 3: Matches

Task Name	Prefix	Target	Prediction
Containers	the crate contains a ligament and a vee. the bag contains a sodium, a meticulousness, a conman, a cascade, and a sundeck. the box contains a telegraphs. the bin contains a bunts, a lacquer, a canto, and a wheelchairs. the jar contains a suedes, a punishments, a parchments, and a webs. took a webs from the jar and put it into the bin	the crate contains a ligament and a vee. the bag contains a sodium, a meticulousness, a conman, a cascade, and a sundeck. the box contains a telegraphs. the bin contains a bunts, a lacquer, a canto, a wheelchairs, and a webs. the jar contains a suedes, a punishments, and a parchments.	the crate contains a ligament and a vee. the bag contains a sodium, a meticulousness, a conman, a cascade, and a sundeck. the box contains a telegraphs. the bin contains a bunts, a lacquer, a canto, a wheelchairs, and a webs. the jar contains a suedes, a punishments, and a parchments.
Navigation Route	the powder room is to the east of the living room. the drawing room is to the south of the powder room. the boiler room is to the west of the living room. the solarium is to the south of the boiler room. to get from the powder room to the boiler room, you must go	to the west, then to the west.	to the west, then to the west.

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Task Name	Prefix	Target	Prediction
Navigation Result	the garage is to the north of the conservatory. the drawing room is to the west of the garage. the mud room is to the east of the garage. the screen porch is to the west of the drawing room. the parlor is to the north of the screen porch. the cellar is to the north of the mud room. if you start in the screen porch and go to the east, then to the east, then to the east, you will end in the	mudroom.	mudroom.
Hard Object	the cellar is to the north of the solarium. the conservatory is to the east of the solarium. the powder room is to the east of the cellar. there is a box in the cellar containing nothing. there is a carton in the cellar containing nothing. there is a sack in the cellar containing a marshmallow. didn't take anything.	there is a box in the cellar containing nothing. there is a carton in the cellar containing nothing. there is a sack in the cellar containing a marshmallow.	there is a box in the cellar containing nothing. there is a carton in the cellar containing nothing. there is a sack in the cellar containing a marshmallow.

Table 4: Failures

Task Name	Prefix	Target	Prediction
Containers	the tub contains a laundering, a nigiri, and a militiamen. the basket contains a finesse, an expectancies, and an annoyance. the bin contains a yarmulke and a scotomas. the bag contains an archdioceses, a flair, a phenoms, a wimples, a buyback, and a mockeries. the case contains a purity, a double-talk, an altar, a voles, and a mini-dress. took a scotomas from the bin and put it into the tub	the tub contains a laundering, a nigiri, a militiamen, and a scotomas. the basket contains a finesse, an expectancies, and an annoyance. the bin contains a yarmulke. the bag contains an archdioceses, a flair, a phenoms, a wimples, a buyback, and a mockeries.	the tub contains a laundering, a nigiri, a militiamen, and a scotomas. the basket contains a finesse, an expectancies, and an annoyance. the bin contains a yarmulke. the bag contains an archdioceses, a flair, a phenoms, a wimples, a buyback, and a mockeries. the case contains a purity, a double-talk, an altar, a voles, and a mini-dress.
Navigation Route	the bedroom is to the south of the game room. the utility room is to the east of the game room. the cellar is to the west of the bedroom. the bathroom is to the west of the cellar. the ballroom is to the north of the utility room. the basement is to the south of the cellar. the great room is to the west of the bathroom. to get from the basement to the ballroom, you must go	to the north, then to the east, then to the east, then to the north.	to the north, then to the east, then to the north, then to the east, then to the north.

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Task Name	Prefix	Target	Prediction
Navigation Result	the solarium is to the north of the conservatory. the garden room is to the south of the conservatory. the antechamber is to the south of the garden room. if you start in the garden room and go to the south, you will end in the	conservatory.	antechamber.
Hard Object	the study is to the south of the screen porch. the cloakroom is to the east of the screen porch. the antechamber is to the west of the cloakroom. there is a cart in the study containing a oat, and a bloodstain. there is a bin in the antechamber containing nothing. there is a carton in the cloakroom containing nothing. there is a container in the cloakroom containing a slingshot. took a oat from the cart in the study. went to the north, then to the east, then to the west. placed it.	there is a cart in the study containing a bloodstain. there is a bin in the antechamber containing nothing. there is a carton in the cloakroom containing nothing. there is a container in the cloakroom containing a slingshot, and a oat.	there is a cart in the study containing a bloodstain. there is a bin in the antechamber containing a oat. there is a carton in the cloakroom containing nothing. there is a container in the cloakroom containing a slingshot.