

Table 19: Examples of correct and incorrect chains of thought produced by PaLM 540B on SayCan robot planning tasks.

<p><b>QUESTION:</b> I spilled my coke on the table, could you throw it away and then bring me something to help clean?</p> <p><b>MODEL ANSWER (CORRECT):</b> Explanation: The user has spilled their coke on the table. I will throw away the coke and then bring the user a sponge. Plan: find(coke), pick(coke), find(trash), put(coke), find(sponge), pick(sponge), find(table), put(sponge). ✓</p>
<p><b>QUESTION:</b> Could you compost that apple for me?</p> <p><b>MODEL ANSWER (CORRECT):</b> Explanation: The user would like me to compost the apple. I will move the apple to the compost. Plan: find(apple), pick(apple), find(trash), put(apple). ✓</p>
<p><b>QUESTION:</b> Can you bring me a drink that is not coke?</p> <p><b>MODEL ANSWER (INCORRECT):</b> Explanation: The user asked me to bring a drink that is not coke, I will bring a sprite. Plan: find(sprite), pick(sprite), find(user), put(sprite). ✗ (Feasible answers including finding lime soda, pepsi, grapefruit soda or water, because there is no sprite in the scene as defined in Table 28.)</p>
<p><b>QUESTION:</b> Can you bring me something salty?</p> <p><b>MODEL ANSWER (INCORRECT):</b> Explanation: The user would like something salty. There are several options in the objects list, so I will bring the user a lime soda. Plan: find(lime soda), pick(lime soda), find(user), put(lime soda). ✗ (Feasible answers including finding chips. The model misidentify lime soda as salty.)</p>

## G Appendix: Full Prompts

Table 20: Few-shot exemplars for full chain of thought prompt for math word problems. This set of exemplars was used for all math word problem datasets except AQuA.

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### PROMPT FOR MATH WORD PROBLEMS

**Q:** There are 15 trees in the grove. Grove workers will plant trees in the grove today. After they are done, there will be 21 trees. How many trees did the grove workers plant today?

**A:** There are 15 trees originally. Then there were 21 trees after some more were planted. So there must have been  $21 - 15 = 6$ . The answer is 6.

**Q:** If there are 3 cars in the parking lot and 2 more cars arrive, how many cars are in the parking lot?

**A:** There are originally 3 cars. 2 more cars arrive.  $3 + 2 = 5$ . The answer is 5.

**Q:** Leah had 32 chocolates and her sister had 42. If they ate 35, how many pieces do they have left in total?

**A:** Originally, Leah had 32 chocolates. Her sister had 42. So in total they had  $32 + 42 = 74$ . After eating 35, they had  $74 - 35 = 39$ . The answer is 39.

**Q:** Jason had 20 lollipops. He gave Denny some lollipops. Now Jason has 12 lollipops. How many lollipops did Jason give to Denny?

**A:** Jason started with 20 lollipops. Then he had 12 after giving some to Denny. So he gave Denny  $20 - 12 = 8$ . The answer is 8.

**Q:** Shawn has five toys. For Christmas, he got two toys each from his mom and dad. How many toys does he have now?

**A:** Shawn started with 5 toys. If he got 2 toys each from his mom and dad, then that is 4 more toys.  $5 + 4 = 9$ . The answer is 9.

**Q:** There were nine computers in the server room. Five more computers were installed each day, from monday to thursday. How many computers are now in the server room?

**A:** There were originally 9 computers. For each of 4 days, 5 more computers were added. So  $5 * 4 = 20$  computers were added.  $9 + 20$  is 29. The answer is 29.

**Q:** Michael had 58 golf balls. On tuesday, he lost 23 golf balls. On wednesday, he lost 2 more. How many golf balls did he have at the end of wednesday?

**A:** Michael started with 58 golf balls. After losing 23 on tuesday, he had  $58 - 23 = 35$ . After losing 2 more, he had  $35 - 2 = 33$  golf balls. The answer is 33.

**Q:** Olivia has \$23. She bought five bagels for \$3 each. How much money does she have left?

**A:** Olivia had 23 dollars. 5 bagels for 3 dollars each will be  $5 * 3 = 15$  dollars. So she has  $23 - 15$  dollars left.  $23 - 15$  is 8. The answer is 8.

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Table 21: Few-shot exemplars for full chain of thought prompt for AQUA.

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<b>PROMPT FOR AQUA ALGEBRAIC WORD PROBLEMS</b>
<b>Q:</b> John found that the average of 15 numbers is 40. If 10 is added to each number then the mean of the numbers is?
Answer Choices: (a) 50 (b) 45 (c) 65 (d) 78 (e) 64
<b>A:</b> If 10 is added to each number, then the mean of the numbers also increases by 10. So the new mean would be 50. The answer is (a).
<b>Q:</b> If $a/b = 3/4$ and $8a + 5b = 22$ , then find the value of a.
Answer Choices: (a) $1/2$ (b) $3/2$ (c) $5/2$ (d) $4/2$ (e) $7/2$
<b>A:</b> If $a/b = 3/4$ , then $b = 4a/3$ . So $8a + 5(4a/3) = 22$ . This simplifies to $8a + 20a/3 = 22$ , which means $44a/3 = 22$ . So a is equal to $3/2$ . The answer is (b).
<b>Q:</b> A person is traveling at 20 km/hr and reached his destiny in 2.5 hr then find the distance?
Answer Choices: (a) 53 km (b) 55 km (c) 52 km (d) 60 km (e) 50 km
<b>A:</b> The distance that the person traveled would have been $20 \text{ km/hr} * 2.5 \text{ hrs} = 50 \text{ km}$ . The answer is (e).
<b>Q:</b> How many keystrokes are needed to type the numbers from 1 to 500?
Answer Choices: (a) 1156 (b) 1392 (c) 1480 (d) 1562 (e) 1788
<b>A:</b> There are 9 one-digit numbers from 1 to 9. There are 90 two-digit numbers from 10 to 99. There are 401 three-digit numbers from 100 to 500. $9 + 90(2) + 401(3) = 1392$ . The answer is (b).

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Table 22: Few-shot exemplars for full chain of thought prompt for the last letter concatenation task.

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<b>PROMPT FOR LAST LETTER CONCATENATION</b>
<b>Q:</b> Take the last letters of the words in "Elon Musk" and concatenate them.
<b>A:</b> The last letter of "Elon" is "n". The last letter of "Musk" is "k". Concatenating them is "nk". The answer is nk.
<b>Q:</b> Take the last letters of the words in "Larry Page" and concatenate them.
<b>A:</b> The last letter of "Larry" is "y". The last letter of "Page" is "e". Concatenating them is "ye". The answer is ye.
<b>Q:</b> Take the last letters of the words in "Sergey Brin" and concatenate them.
<b>A:</b> The last letter of "Sergey" is "y". The last letter of "Brin" is "n". Concatenating them is "yn". The answer is yn.
<b>Q:</b> Take the last letters of the words in "Bill Gates" and concatenate them.
<b>A:</b> The last letter of "Bill" is "l". The last letter of "Gates" is "s". Concatenating them is "ls". The answer is ls.

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