Help students **work together** to make sense of mathematics

1. What *strategy* did you use?
2. Do you *agree*?
3. Do you *disagree*?
4. Would you *ask the rest of the class* that question?
5. Could you *share your method* with the class?
6. What part of what he said *do you understand*?
7. Would someone like to *share ___*?
8. Can you *convince the rest of us* that your answer makes sense?
9. What do others think about what [student] said?
10. Can someone *retell or restate* [student]'s explanation?
11. Did you *work together*? In what way?
12. Would anyone like to *add to what was said*?
13. Have you *discussed* this with your group? With others?
14. Did anyone get a *different answer*?
15. Where would you go for help?
16. Did everybody *get a fair chance* to talk, use the manipulatives, or be the recorder?
17. How could you help another student *without telling them the answer*?
18. How would you explain ___ to someone who missed class today?
19. Is this a *reasonable answer*?
20. Does that make *sense*?
21. Why do you think that? Why is that true?
22. Can you *draw a picture or make a model* to show that?
23. How did you reach that conclusion?
24. Does anyone want to *revise* his or her answer?
25. How were you sure your answer was right?
Help students learn to reason mathematically

26. How did you begin to think about this problem?
27. What is another way you could solve this problem?
28. How could you prove _____?
29. Can you explain how your answer is different from or the same as [student]'s answer?
30. Let’s break the problem into parts. What would the parts be?
31. Can you explain this part more specifically?
32. Does that always work?
33. Can you think of a case where that wouldn’t work?
34. How did you organize your information? Your thinking?

Help students evaluate their own processes and engage in productive peer interaction

35. What do you need to do next?
36. What have you accomplished?
37. What are your strengths and weaknesses?
38. Was your group participation appropriate and helpful?
39. What is this problem about? What can you tell me about it?
40. Do you need to define or set limits for the problem?
41. How would you interpret that?
42. Could you reword that in simpler terms?
43. Is there something that can be eliminated or that is missing?
44. Could you explain what the problem is asking?
45. What assumptions do you have to make?
46. What do you know about this part?
47. Which words were most important? Why?

Help students with problem comprehension

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100 Questions That Promote Mathematical Discourse
Help students learn to **conjecture, invent, and solve** problems

- **48** What would happen if ___?
- **49** Do you see a **pattern**?
- **50** What are some **possibilities** here?
- **51** Where could you find the **information** you need?
- **52** How would you **check your steps** or your answer?
- **53** What **did not work**?
- **54** How is your solution method the **same as or different from** [student]'s method?
- **55** Other than retracing your steps, how **can you determine** if your answers are appropriate?
- **56** How did you **organize** the information? Do you have a **record**?
- **57** How could you solve this using **tables, lists, pictures, diagrams**, etc.?
- **58** What have you tried? What **steps** did you take?
- **59** How would it look if you used this **model** or these **materials**?
- **60** How would you draw a **diagram or make a sketch** to solve the problem?
- **61** Is there another possible **answer**? If so, explain.
- **62** Is there another **way to solve** the problem?
- **63** Is there another **model** you could use to solve the problem?
- **64** Is there anything you've **overlooked**?
- **65** **How did you think** about the problem?
- **66** What was your **estimate or prediction**?
- **67** How confident are you in your answer?
- **68** **What else** would you like to know?
- **69** What do you think comes **next**?
- **70** Is the solution **reasonable**, considering the context?
- **71** Did you have a **system**? Explain it.
- **72** Did you have a **strategy**? Explain it.
- **73** Did you have a **design**? Explain it.
Help students learn to connect mathematics, its ideas, and its application

74 What is the **relationship** between ___ and ___?
75 Have we ever solved a problem **like this before**?
76 What uses of mathematics did you find in the **newspaper** last night?
77 What is the **same**?
78 What is **different**?
79 Did you use skills or build on concepts that were **not necessarily mathematical**?
80 Which **skills or concepts** did you use?
81 What **ideas** have we explored before that were useful in solving this problem?
82 Is there a **pattern**?
83 **Where else** would this strategy be useful?
84 How does this **relate** to ___?
85 Is there a **general rule**?
86 Is there a **real-life situation** where this could be used?
87 How would your method work with **other problems**?
88 What other problem does this seem to **lead to**?
89 Have you tried making a **guess**?
90 **What else** have you tried?
91 Would another **method** work as well or better?
92 Is there another **way** to draw, explain, or say that?
93 Give me another related **problem**. Is there an easier problem?
94 How would you **explain** what you know right now?
95 What was **one thing you learned** (or two, or more)?
96 Did you **notice any patterns**? If so, describe them.
97 What **mathematics topics** were used in this investigation?
98 What were the **mathematical ideas** in this problem?
99 What is mathematically **different about these two situations**?
100 What are the **variables** in this problem? What stays **constant**?