Unit 7 Lesson 4: Solving for Unknown Angles

1 True or False: Length Relationships (Warm up)

Student Task Statement

Here are some line segments.

Decide if each of these equations is true or false. Be prepared to explain your reasoning.

$$CD + BC = BD$$

$$AB + BD = CD + AD$$

$$AC - AB = AB$$

$$BD - CD = AC - AB$$

2 Info Gap: Angle Finding

Student Task Statement

Your teacher will give you either a *problem card* or a *data card*. Do not show or read your card to your partner.

If your teacher gives you the *problem card*:

1. Silently read your card and think about what information you need to be able to answer the question.

2. Ask your partner for the specific information that you need.

3. Explain how you are using the information to solve the problem.

   Continue to ask questions until you have enough information to solve the problem.

4. Share the *problem card* and solve the problem independently.

5. Read the *data card* and discuss your reasoning.

If your teacher gives you the *data card*:

1. Silently read your card.

2. Ask your partner *"What specific information do you need?"* and wait for them to *ask* for information.

   If your partner asks for information that is not on the card, do not do the calculations for them. Tell them you don't have that information.
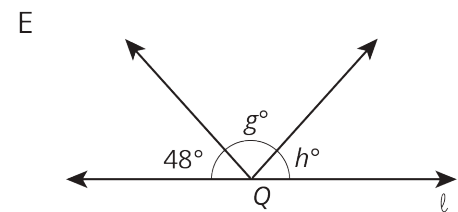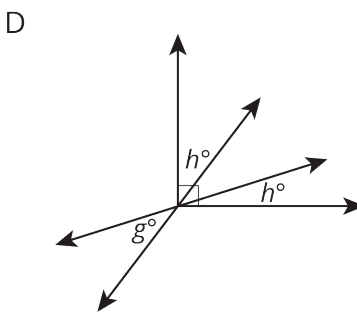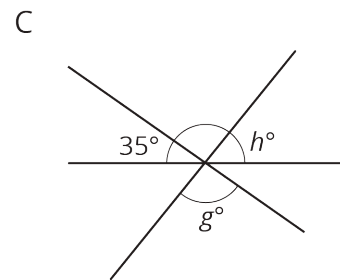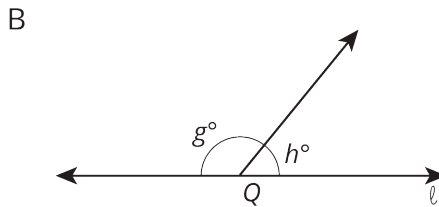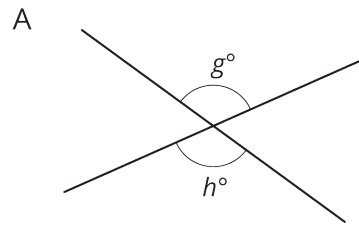
3. Before sharing the information, ask "*Why do you need that information?*" Listen to your partner's reasoning and ask clarifying questions.

4. Read the *problem card* and solve the problem independently.

5. Share the *data card* and discuss your reasoning.

Pause here so your teacher can review your work. Ask your teacher for a new set of cards and repeat the activity, trading roles with your partner.

3 What's the Match?

Student Task Statement

Match each figure to an equation that represents what is seen in the figure. For each match, explain how you know they are a match.

A

B

C

D

E

1. $g + h = 180$

2. $g = h$

3. $2h + g = 90$

4. $g + h + 48 = 180$

5. $g + h + 35 = 180$