Name _____

Learning Target: Solve multi-step word problems involving time conversion.

Example The bus ride to school is $\frac{1}{4}$ hour and the bus ride home is $\frac{1}{2}$ hour each day. After 5 days, how many more minutes do you spend riding the bus home than riding the bus to school?

Think: What do you know? What do you need to find? How will you solve?

Step 1: Convert $\frac{1}{4}$ hour and $\frac{1}{2}$ hour to minutes.

There are __60__ minutes in 1 hour.

$\frac{1}{4} \times$ __60__ = __15__ minutes

$\frac{1}{2} \times$ __60__ = __30__ minutes

The bus ride to school is __15__ minutes and from school is __30__ minutes.

Units of Time
1 minute (min) = 60 seconds (sec)
1 hour (h) = 60 minutes (min)
1 day (d) = 24 hours (h)
1 week (wk) = 7 days (d)
1 year (yr) = 12 months (mo)
1 year (yr) = 52 weeks (wk)

Step 2: Find the amount of time you ride the bus each way in one week.

There are __5__ days in 1 school week

__15__ × __5__ = __75__ minutes

__30__ × __5__ = __150__ minutes

The weekly bus ride to school is __75__ minutes. and from school is __150__ minutes.

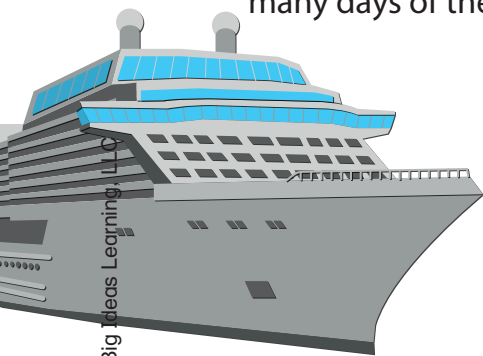**Step 3:** Find how many more minutes were spent riding from school than to school.

__150__ − __75__ = __75__   So, the bus ride from school is __75__ more minutes.
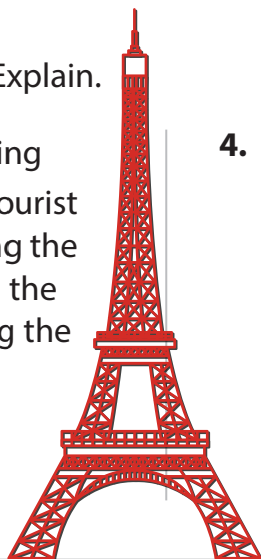
Analyze a Problem What do you know? What do you need to find? Explain.
Check students' work.

1. A cruise to Australia from California takes 77 days. The ship is docked at ports for 264 hours of the trip. How many days of the cruise were at sea?

2. A strawberry seed takes 3 weeks to sprout. It then takes 10 weeks to flower. After 24 more days, strawberries are ripe and ready to pick. How many days did it take the seed to go from being planted to producing ripe strawberries?

Make a Plan How will you solve? Explain.
Check students' work.

3. A tourist spends $\frac{3}{5}$ hour climbing steps of the Eiffel Tower. The tourist takes a 15-minute break during the climb. How many seconds did the tourist spend actively climbing the steps?

4. Violin practice is 2 hours a day, 3 times a week. What fraction of the week is spent practicing the violin?

Solve.

5. Your aunt lives in the north for $\frac{1}{5}$ of the year and lives in the south for $\frac{4}{5}$ of the year. How many more days of the year does your aunt live in the south than the north?
   219 days

6. Your friend completes a challenge in 2.5 weeks. It takes you 16 days to complete the same challenge. Who completes the challenge in the least amount of time?
   You

7. Your uncle will be overseas for 5 years. He has already spent 3.5 years there. How many more weeks until your uncle comes home?
   78 weeks

8. Your cousin is 48 months old. Your sibling is 1 year and 2 weeks old. How many weeks older is your cousin than your sibling?
   154 weeks

9. **DIG DEEPER** It takes a construction team 7 weeks to make repairs to a building. The workers work 8-hour days, 5 days a week. How many hours of the 7 weeks were *not* spent working?
   896 hours

10. It takes 1.5 minutes for a scuba diver to descend, 27 minutes to explore, and 5 minutes to ascend. How many seconds is the scuba diver under water?
    2,010 seconds

2   **Problem Solving: Time Conversion**