

## Couriers and messengers: Real-world problem solving

### Lesson Steps:

**Show your calculations, including the formulas or equations you will use to develop your time line. Be sure to use the scale on the map to determine distances. Use I-40 when planning the trip.**

1. Calculate the distances between major cities using the scale on the map.
2. Include the distance, the time for travel, and the projected arrival times in each of the major cities (Winston-Salem, Greensboro, Raleigh, and Wilmington).

	<b>Distance</b>	<b>Time for travel</b> <b>Distance ÷ speed limit</b>	<b>Anticipated time of arrival</b>
Winston-Salem to Greensboro			In Greensboro
Greensboro to Raleigh			In Raleigh
Raleigh to Wilmington			In Wilmington
Wilmington to Raleigh			In Raleigh
Raleigh to Greensboro			In Greensboro
Greensboro to Winston-Salem			In Winston-Salem

3. What time should you actually begin your workday in order to arrive in Wilmington in time to make your delivery by noon? \_\_\_\_\_

How did you determine this time? \_\_\_\_\_

\_\_\_\_\_

4. When would you take your required breaks and stop for lunch? (Include the approximate location.)

Break/Lunch

Time

Location

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. What time would you expect to arrive back in Winston-Salem? \_\_\_\_\_

6. How is the ability to use indirect measurement and scale helpful to a courier or messenger?

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7. Why would a career as a courier or messenger be a good job to have?

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8. Why would a career as a courier or messenger be a challenging job to have?

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## Couriers and messengers: Real-world problem solving

### Answer key

#### Lesson Steps:

**Show your calculations, including the formulas or equations you will use to develop your time line. Be sure to use the scale on the map to determine distances. Use I-40 when planning the trip.**

1. Calculate the distances between major cities using the scale on the map.
2. Include the distance, the time for travel, and the projected arrival times in each of the major cities (Winston-Salem, Greensboro, Raleigh, and Wilmington).

*Anticipated time of arrival will vary based on start time. Distances and time for travel should be close to these approximations.*

	<b>Distance</b>	<b>Time for travel</b> <b>Distance ÷ speed limit</b>	<b>Anticipated time of arrival</b>
Winston-Salem to Greensboro	~30 mi	~35 min	In Greensboro  ~8:00 am
Greensboro to Raleigh	~80 mi	~1 ½ hours + 15-minute break	In Raleigh  ~9:45 am
Raleigh to Wilmington	~130 mi	~2 hours	In Wilmington  ~11:45 am
Wilmington to Raleigh	~130 mi	~2 hours + 30-minute lunch	In Raleigh  ~2:15 pm
Raleigh to Greensboro	~80 mi	~1 ½ hours + 15-minute break	In Greensboro  ~4:00 pm
Greensboro to Winston-Salem	~30 mi	~35 min	In Winston-Salem  ~4:35 pm

3. What time should you actually begin your workday in order to arrive in Wilmington in time to make your delivery by noon? ~7:00 – 7:25 am

How did you determine this time? **Accept various answers.** Ex: “So I would arrive in Wilmington by 11:45 am at the latest and be able to find the location of the office.” “So I would have plenty of time in case of a traffic problem on the way.”

4. When would you take your required breaks and stop for lunch? (Include the approximate location.) **Answers will vary based on start time.**

<u>Break/Lunch</u>	<u>Time</u>	<u>Location</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

5. What time would you expect to arrive back in Winston-Salem?  
**Answers will vary based on start time.**

6. How is the ability to use indirect measurement and scale helpful to a courier or messenger?

**Accept various answers.** Ex: “The ability to use indirect measurement and scale would be helpful to a courier or messenger so they could predict the amount of time needed to make a delivery based on a map.”

7. Why would a career as a courier or messenger be a good job to have?

**Accept various answers.** Ex: “Having a job as a courier or messenger would be good because you get to drive and listen to music. This would be a good job for someone who likes to be alone a lot and likes to drive.”

8. Why would a career as a courier or messenger be a challenging job to have?

**Accept various answers.** Ex: “Having a job as a courier or messenger would be challenging because you would be driving a lot during the day and might get sleepy or distracted. You would be alone a lot.”