

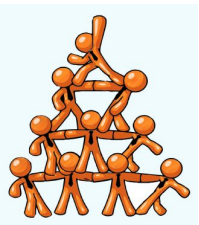
3-8: Learning Goals

- Let's investigate constant speed some more.

3-8-1: Back on the Treadmill Again

While training for a race, Andre's dad ran 12 miles in 75 minutes on a treadmill. If he runs at that rate:

1. How long would it take him to run 8 miles?
2. How far could he run in 30 minutes?



3-8-2: Picnics on the Rail Trail

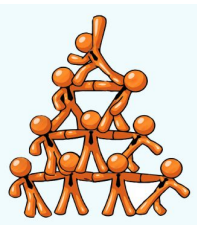


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Kiran and Clare live 24 miles away from each other along a rail trail. One Saturday, the two friends started walking toward each other along the trail at 8:00 a.m. with a plan to have a picnic when they meet.

Kiran walks at a **speed** of 3 miles per hour while Clare walks 3.4 miles per hour.

1. After one hour, how far apart will they be?
2. Make a table showing how far apart the two friends are after 0 hours, 1 hour, 2 hours, and 3 hours.
3. At what time will the two friends meet and have their picnic?
4. Kiran says "If I walk 3 miles per hour toward you, and you walk 3.4 miles per hour toward me, it's the same as if you stay put and I jog 6.4 miles per hour." What do you think Kiran means by this? Is he correct?
5. Several months later, they both set out at 8:00 a.m. again, this time with Kiran jogging and Clare still walking at 3.4 miles per hour. This time, they meet at 10:30 a.m. How fast was Kiran jogging?



3-8-3: Swimming and Biking

Jada bikes 2 miles in 12 minutes. Jada's cousin swims 1 mile in 24 minutes.

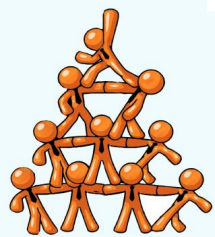
1. Who was moving faster? How much faster?
2. One day Jada and her cousin line up on the end of a swimming pier on the edge of a lake. At the same time, they start swimming and biking in opposite directions.
 - a. How far apart will they be after 15 minutes?
 - b. How long will it take them to be 5 miles apart?



3-8: Lesson Synthesis

Let's think about how Jada was traveling 2 miles in 12 minutes.

- What are some ways to communicate her speed?
- How is it calculated?
- How would we calculate the other unit rate in this situation?
- What does it mean?
- What are your favorite tools for making sense of and solving constant speed problems?



3-8: pace

Pace is an attribute that tells you how fast or slow an object is moving. A greater pace means the object is moving more slowly. Pace is measured in units like seconds per meter, hours per miles, and minutes per kilometer.

3-8: Speed

Speed is an attribute that tells you how fast or slow an object is moving. A greater speed means the object is moving faster. Speed is measured in units of distance per unit of time like meters per second, miles per hour, and kilometers per second.

3-8: Learning Targets

- I can solve more complicated problems about constant speed situations.



3-8-4: Penguin Speed

A penguin walks 10 feet in 6 seconds. At this speed:

1. How far does the penguin walk in 45 seconds?
2. How long does it take the penguin to walk 45 feet?

Explain or show your reasoning.

