

# Friday, January 12, 2018

## Your Learning Goal:

After students explore several internet websites, they will explain the difference between motion, reference point, and speed with 80% accuracy.

Table of Contents: Speed it Up\* - 17R

## Catalyst (17L):

The trash can is to the left of the light post. There is also a fence behind the light post. What is the reference point in that situation and how do you know?



**Homework:**  
Speed Problems  
**DUE FRIDAY**



### **Agenda:**

1. Catalyst
2. Trackstar
3. Reflection

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<u>Date</u>	<u>Assignment</u>	<u>Pg #</u>
1/02/18	How Fast is Fast? *	16R + L
1/12/18	Speed it Up *	17R + L

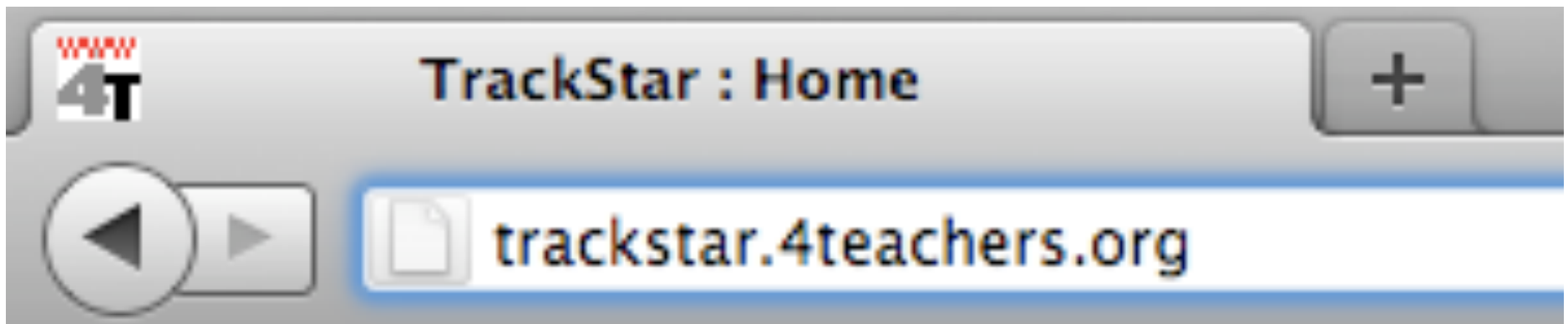
Catalyst:

The trash can is to the left of the light post. There is also a fence behind the light post. What is the reference point in that situation and how do you know?

The \_\_\_\_\_ is the reference point in this example. I know that \_\_\_\_\_ is the reference point because...





- Open up a web browser (Firefox, Safari, or Google Chrome)
- Type in trackstar.4teachers.org  
(NO www)



- Find “View Track #.” Type in “394284” and click “Go.”

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 **TRACKSTAR** 

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- [Make a Quiz for your Track](#)
- [Build a Web Page for your Track](#)
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**Find a Track**

View Track #	<input type="text" value="394284"/>	<input type="button" value="Go"/>
Keyword Search	<input type="text"/>	<input type="button" value="Go"/> <a href="#">Advanced</a>
Author Search	<input type="text"/>	<input type="button" value="Go"/> <a href="#">Advanced</a>

- [Browse Themes and Standards](#)
- [Browse by Subject/Grades](#)

- Click “View in Frames.”

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**TRACKSTAR** 4teachers

Home | Login to Make or Edit a Track | Help Organize and annotate Web sites for use in lessons.

### Motion Webquest

Track # 394284  
Annotations by: Ms. Tao

Track Category	
Grade(s):	Middle (5-9)
Subjects(s):	Science
Last Modified:	Aug 26, 2012
Format:	Worksheet

**Track Description**

[View In Frames](#) [View In Text](#)

*Choosing Frames View or Text View*



**Motion Webquest**  
*Annotation by Ms. Tao*

Sites for Track #394284

1. **Reference Point**
2. **What is speed?**
3. **How fast is fast?**
4. **A Day at the Races**
5. **Speed Review**

Track Description  
E-mail this Track

Reference Point

Site Location: [http://www.classzone.com/books/ml\\_science\\_share/vis\\_sim/mfm05\\_pg7\\_relmotion/mfm05\\_pg7\\_relmotion.html](http://www.classzone.com/books/ml_science_share/vis_sim/mfm05_pg7_relmotion/mfm05_pg7_relmotion.html)

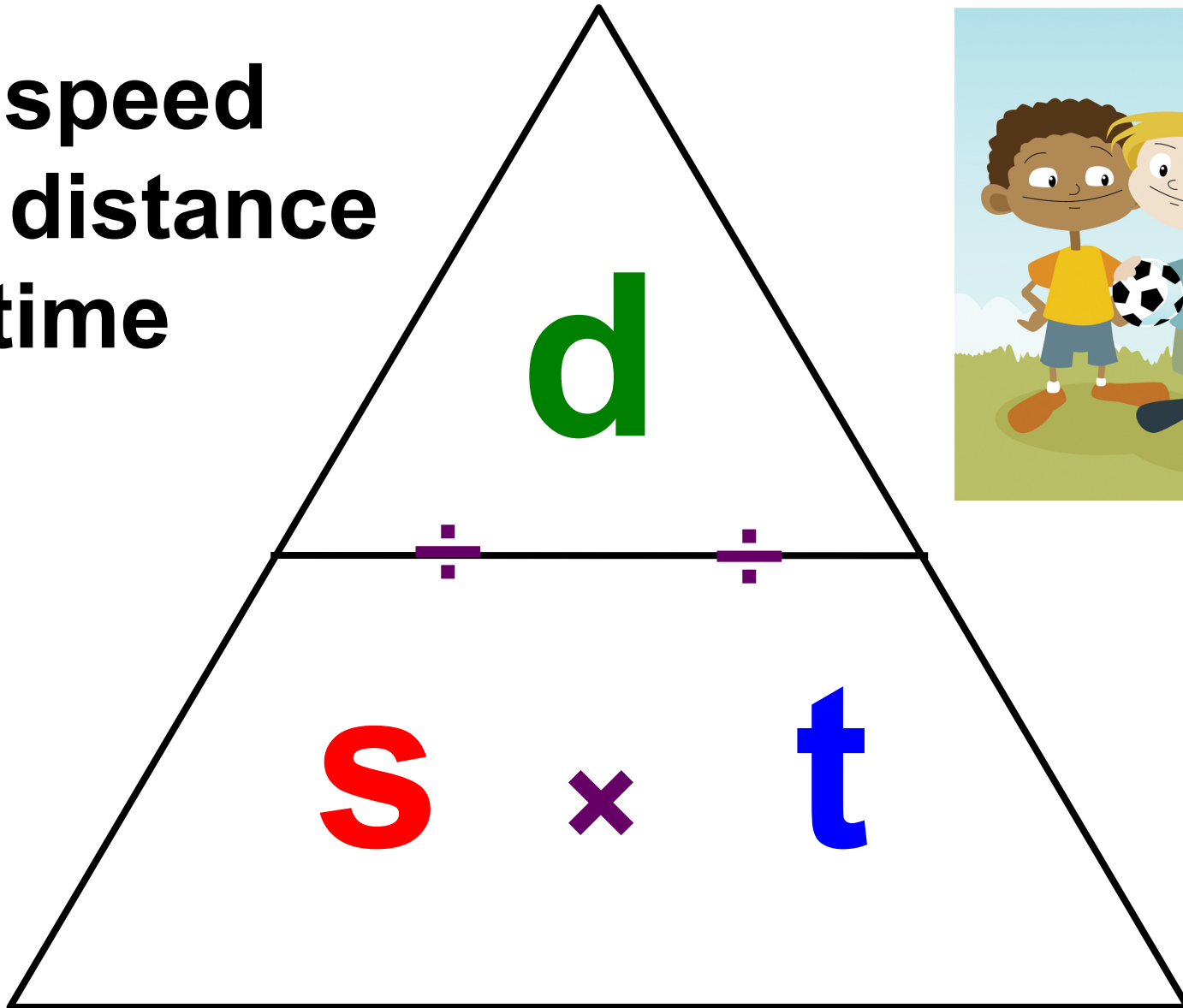


# The Magic Triangle

**s** = speed

**d** = distance

**t** = time





# The Speed Equation

$$\text{Average Speed} = \frac{\text{total distance}}{\text{total time}}$$



**total time**

# The Speed Steps

Imagine that a car traveled **100 meters** in **5 seconds**.

What is

the **average speed** of the car? Be sure to show all the steps!

Step 1:	Write down the equation.	
Step 2:	Write down what you know.	
Step 3:	Plug in your numbers.	
Step 4:	Do the math.	
Step 5:	Box your answer.	

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Step 2:	Write down what you know.	$\text{distance} = 100 \text{ m}$ $\text{time} = 5 \text{ sec}$
Step 3:	Plug in your numbers.	$\text{speed} = \frac{100 \text{ m}}{5 \text{ sec}}$
Step 4:	Do the math.	
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# The Speed Steps

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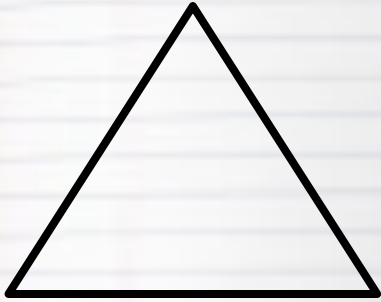
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the **average speed** of the car? Be sure to show all the steps!

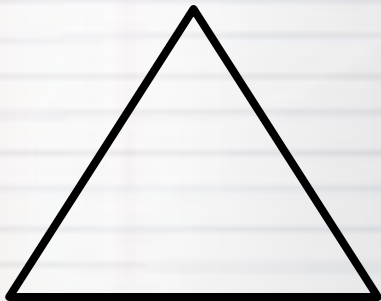
Step 1:	Write down the equation.	$\text{speed} = \frac{\text{distance}}{\text{time}}$
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Speed it Up

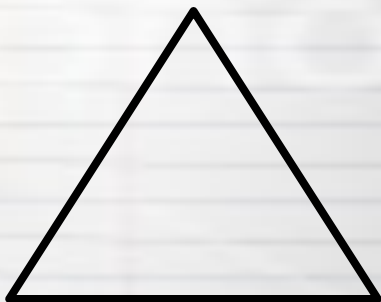
10/4/16



speed =



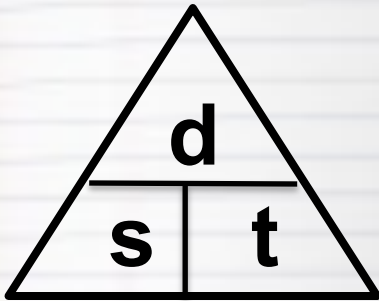
distance =



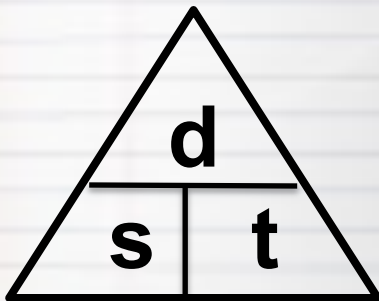
time =

Speed it Up

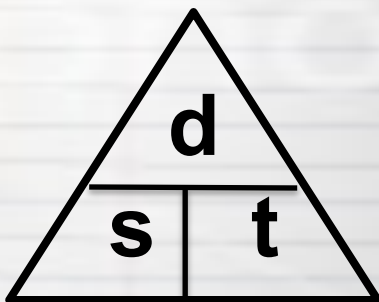
10/4/16



speed =



distance =

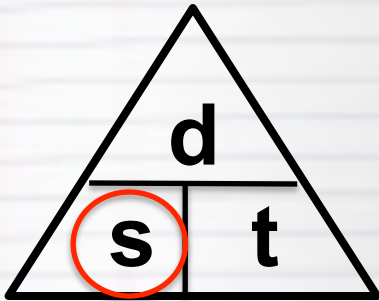


time =



# Speed it Up

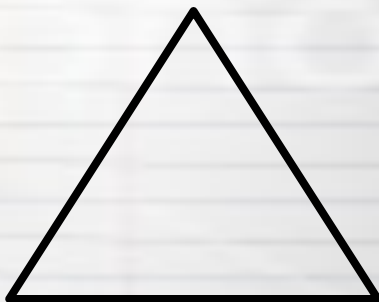
10/4/16



$$\text{speed} = \frac{\text{distance}}{\text{time}}$$



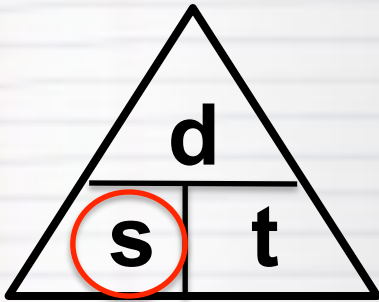
$$\text{distance} =$$



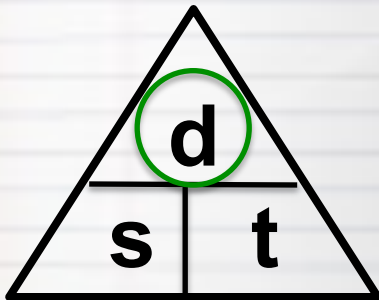
$$\text{time} =$$

## Speed it Up

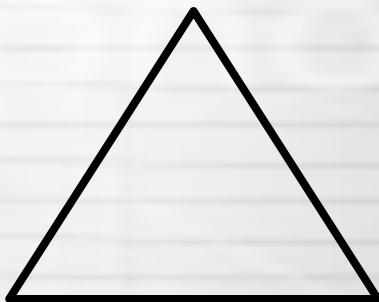
10/4/16



$$\text{speed} = \frac{\text{distance}}{\text{time}}$$



$$\text{distance} = \text{speed} \times \text{time}$$

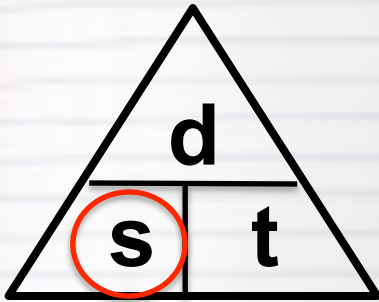


$$\text{time} =$$

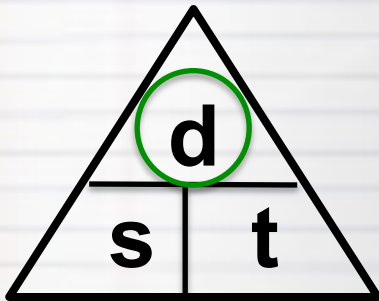
**11R**

## Speed it Up

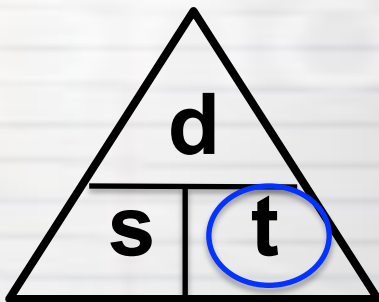
10/4/16



$$\text{speed} = \frac{\text{distance}}{\text{time}}$$



$$\text{distance} = \text{speed} \times \text{time}$$



$$\text{time} = \frac{\text{distance}}{\text{speed}}$$

**11R**

10/4/16

## Pre-Write:

The trash can is to the left of the light post. There is also a fence behind the light post.

What is the reference point in that situation and why?

## Reflection

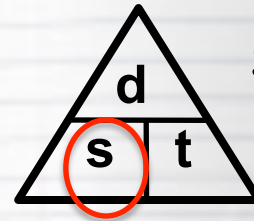
In your own words, write the *definition* and *draw a picture* for the following words:

- position
- speed

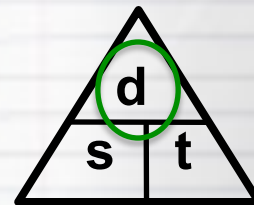
11L

10/4/16

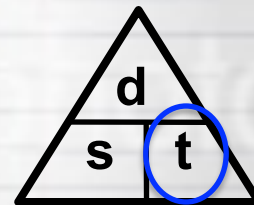
## Speed it Up



$$\text{speed} = \frac{\text{distance}}{\text{time}}$$



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11R