Dec. 11, 2019

1. Collect 1 Flashcard Race per table
2. Sharpen your pencil
3. Sit in assigned seat
4. Play Flashcard race with table partner to review, use a level 1/whisper voice

Push

Pull

Advisory

1. Successful people get that way by being lucky. Agree, or disagree? Explain
2. If I try hard and don't succeed it's not my fault. Agree, or disagree? Explain

Video:
https://www.flextalk.org/how-to-be-diligent-core-virtue-5/
Re-answer the above questions after watching the video.

6.(8) Force, motion, and energy. The student knows force and motion are related to potential and kinetic energy.

(A) compare and contrast potential and kinetic energy;

(B) identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces;

(C) calculate average speed using distance and time measurements;

(D) measure and graph changes in motion; and

(E) investigate how inclined planes can be used to change the amount of force to move an object.

Push

Pull

LO

Students will apply knowledge over Potential & Kinetic Energy, Unbalanced Force, Speed=Distance/time (TEK 6.8), to complete a fall semester review.

DOL

Students will complete 10/10 questions over TEK 6.8/ force and motion with an 80% or higher.

Agenda

1. PDN
2. Finish Kahoot (BEHAVIOR ALLOWING) over TEK 6.8 (Regular)

   Team Question/Answer Kahoot ?'s (Honors)

   To assist with completing the Fall Semester Review TEK 6.8 Packet

3. Complete DOL Questions
4. Review DOL Questions

Fall Semester Final Test Review TEK 6.8 Force and Motion

Name: _____ Period: _____

KAHOOT:(Motion/Speed/Force/Energy)

https://create.kahoot.it/share/motion-speed-force-energy-vocab-review/31006957-2457-4cc5-9d0f-af093d3fe7e7

(Physics 1 Test review) https://create.kahoot.it/share/physics-1-test-review/80a2f37f-c37c-4135-8dfd-39a57ecd20a6

Quizlet:

https://quizlet.com/191599709/unit-5-test-tek-68-abcde-flash-cards/

https://quizlet.com/333268030/tek-68d-graphing-motion-flash-cards/

https://quizlet.com/291076346/tek-86-balanced-and-unbalanced-forces-force-and-motion-newtons-laws-flash-cards/

Gateway:

https://www.texasgateway.org/resource/changes-motion

https://www.texasgateway.org/resource/average-speed

https://www.texasgateway.org/resource/potential-and-kinetic-energy-1

https://www.texasgateway.org/resource/changes-speed-and-direction

Kahoot Directions: fill in the correct answers for each question below as you follow along / play the game

Motion/Speed/Force/Energy Vocab Kahoot Review

1. When I push a glass across the table, I am applying a ____ to the glass.
2. What is the product of the mass and velocity of an object called?

3. Speed equals distance traveled divided by the time. What is the equation for speed?
4. When I pull back on a slingshot I am producing what type of energy?
5. When I am swinging forwards and backwards, up and down on a swing set I am showing what type of energy?
6. What tool, shape can I use to help me solve for speed?
7. What type of graph shows the total distance traveled by the elapsed time to cover that distance called?
8. When you walk from the door to your desk, we say you are in _____.
9. The distance an object moves in a unit of time is…
10. When my car goes 55mph north, I am giving you it's _____.
11. What type of graph plots the distance traveled by an object by the time it took?
12. What type of graph shows the total distance traveled by that elapsed time to cover that distance called?
13. If two equal forces push against a file cabinet, what type of force does this represent?

14. In the game of tug a war when the pink ribbon crossed the point of reference it was showing what type of force?

15. If you are riding in a car and watch another car pass you, what if your reference point?

Physics 1 Test Kahoot Review

1. What does a downward curving line represent on a distance-time graph?
2. What does a straight diagonal line represent on a distance-time graph?
3. What does a straight horizontal line represent on a distance-time graph?
4. What two factors do you need if you want to know the speed of something?
5. The longer the ramp, the less _____ is needed.
6. _____ is energy of motion.
7. When a ball is sitting at the top of a very large hill it has _____ energy.
8. When a ball is rolling down a hill it is building ……
9. When a ball is rolling down a hill it is losing…..
10. When two forces act in opposite directions but with equal force, the object's net force is ……

11. When an object has one greater force then another acting on it, the objects net force is …….
12. In a game of the tug-a-war the rope will move towards the …..
13. When using an inclined plane I want a _____ ramp if I want to use less force.
14. When using an inclined plane I want a _____ ramp if I want to use more force.
15. Joe rode his bike 10km in 2 minutes. How fast was he going?
16. Sue went 20m/h in 2 hours. How far did she go?
(Student is to draw picture / graph as seen on Kahoot below)
17. What was the speed of the car at 1.5km? (graph on kahoot)
18. What was the car doing between 10-20 minutes into the trip? (graph on kahoot)
19. What is the average speed the car went during this trip? (Graph of Kahoot)
20. What can we tell about the movement of an object by looking at this graph? (graph on kahoot)
21. How does the ramp help the person move the dresser? (pic on Kahoot)
22. At what position does the ball have the greatest potential energy and kinetic energy? (pic on kahoot)

23. At which location does the ball have the least amount of kinetic energy? (pic on kahoot
24. Based on the diagram, in which direction will the rope move? (Pic on Kahoot)

6.8 Review Task Card Questions

1. Unbalanced forces cause a change in an object's speed, position, or direction. What direction will a book lying on the front seat of a car move if the car suddenly stops?
   A: it will not move
   B: it will forward
   C: it will move backward
   D: It will move sideways

2. Both potential and kinetic energy can be observed at a skatepark.

Which of the following best explains the potential and kinetic energy as the skater moves from position 1 to position 2?
A: the amount of kinetic energy remains the same
B: the amount of kinetic energy is equal to one third of the potential energy
C: as the potential energy decreases, the kinetic energy increases
D: as the potential energy decreases, the kinetic energy Decreases

1. A student is using an inclined plane to move a heavy box into a truck that is two meters off the ground. Which of the inclined planes will require the least amount of force to move the box into the truck?

A: 

B: 

C: 

D: 

2. The graph below shows the motion of a young man riding a bicycle.

What is the average speed of the bicyclist between 3 and 9 seconds?

A: .83 m/s B: 1.2 m/s C: 1.5 m/s D: 12 m/s

30											
25											
20											
15											
10											
5											
0	1	2	3	4	5	6	7	8	9	10	11

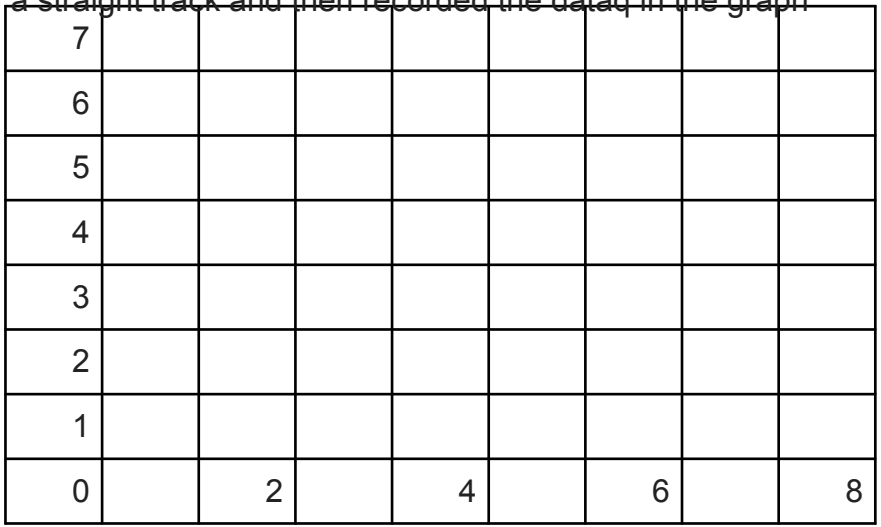
1. Last Saturday a student took a bike trip and recorded his distance and time. He then created a graph using his data.

20						
15						
10						
5						
0	1	2	3	4	5	6

Based on the graph above, during which time segment did the student travel the fastest?

A: between hour 1 and 2
B: between hour 2 and 3
C: between hour 3 and 4
D: between hour 4 and 5

1. A hobbyist collected data about the motion of a toy train on a straight track and then recorded the dataq in the graph below.



Which of these accurately describes the motion of the toy train?

A: the toy train speeds up while moving forward and then slows down

B: the toy train slows down while moving forward and then moves backward

C: The toy train moves forward at a constant speed, slows down, and then stops

D: the toy train moves forward at an increasing speed, stops, and then moves forward

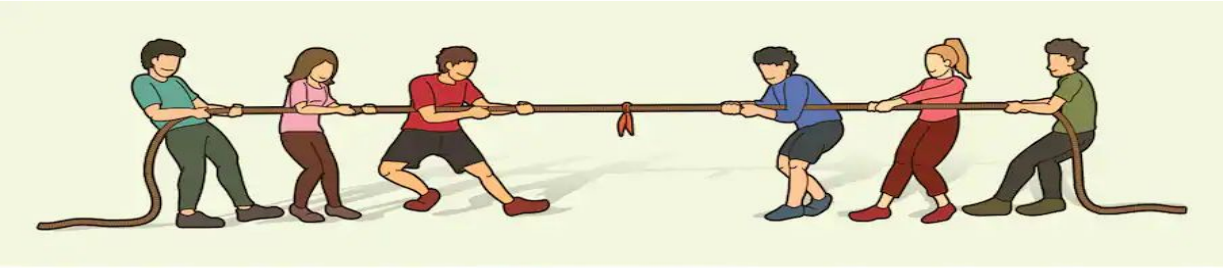
1. A ball is dropped from the roof of a building. Points A, B, C and D in the diagram below represents positions of the ball as it falls.

At which position will the ball have the greatest potential Energy?

A: A C: C

B: B D: D

1. During PE class, a group of student splayed tug-of-war . In the game, students on each team pulled with the amount of force shown in the diagram below.



← 35N 30N 25n I 20N 25N 30N →

West / Team 1 East / Team 2

Based on the diagram in which direction will the center of the rope move?

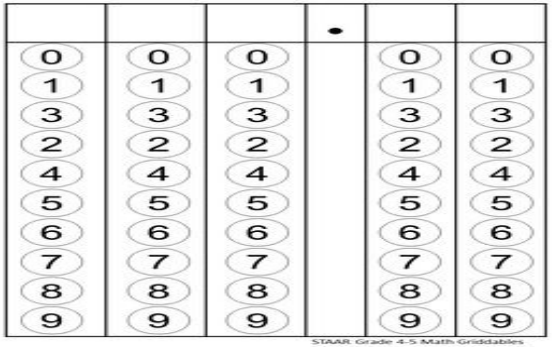
A: the center of the rope will move to the west because the net force is greater in this direction.

B: The center of the rope will move to the east because the net force is greater in the direction

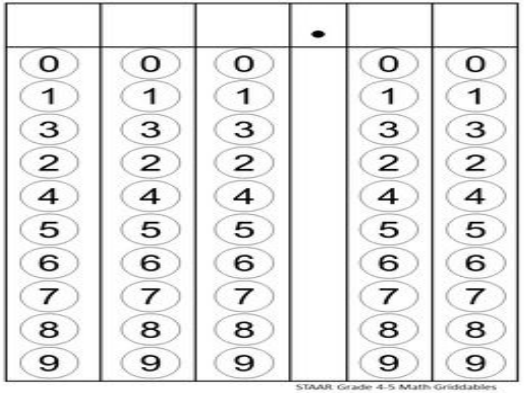
C: The center of the rope will move to the west because the net force is less in this direction

D: the center of the rope will not move because the net force is zero

1. A young woman is training to run the Dallas marathon. One afternoon she ran 20.8 kilometers in 1.6 hours. Wha was her average speed during her training run?



1. Sharks are built for speed because they need to swim fast enough to catch their prey. What was the average speed of a great white shark that swam 10 kilometers in .25 hours?



1. Unbalanced forces cause a change in an object's speed, position, or direction. What direction will a book lying on the front seat of a car move if the car suddenly stops?

~~A: it will not move~~

book fly forward off seat

?B: it will forward

~~C: it will move backward~~

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2. Both potential and kinetic energy can be observed at a skatepark.

Which of the following best explains the potential and kinetic energy as the skater moves from position 1 to position 2?

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~~B: the amount of kinetic energy is equal to one third of the potential energy~~

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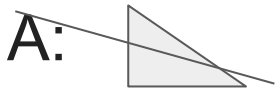
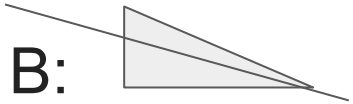
3. A student is using an inclined plane to move a heavy box into a truck that is two meters off the ground. Which of the inclined planes will require the least amount of force to move the box into the truck?

increase length = decrease force

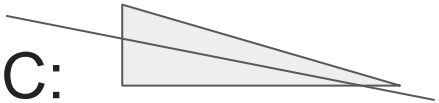
A:



B:



C:

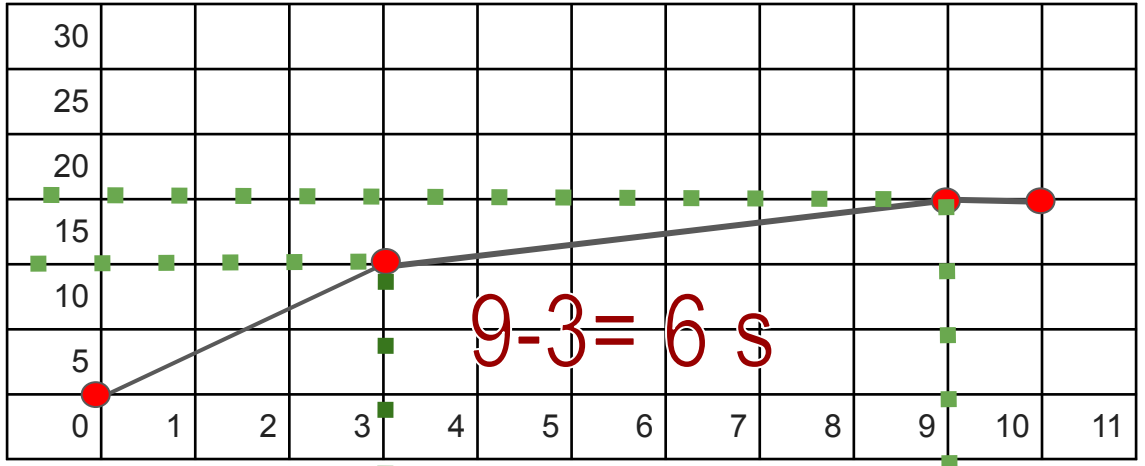


D:

?

longest

4. The graph below shows the motion of a young man riding a bicycle.



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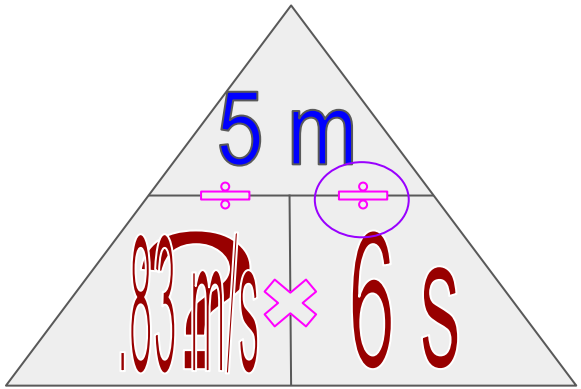

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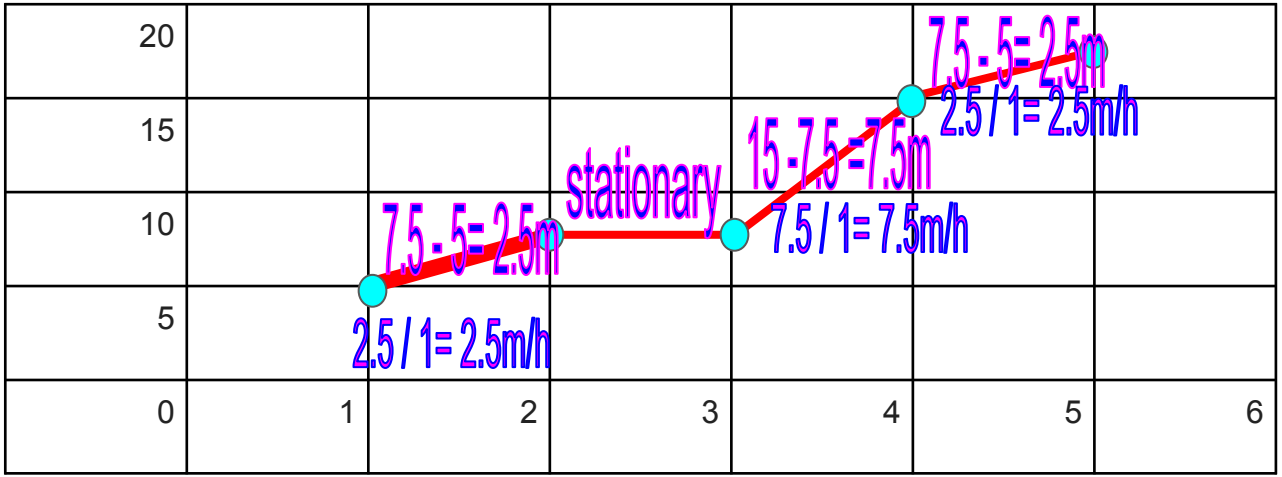

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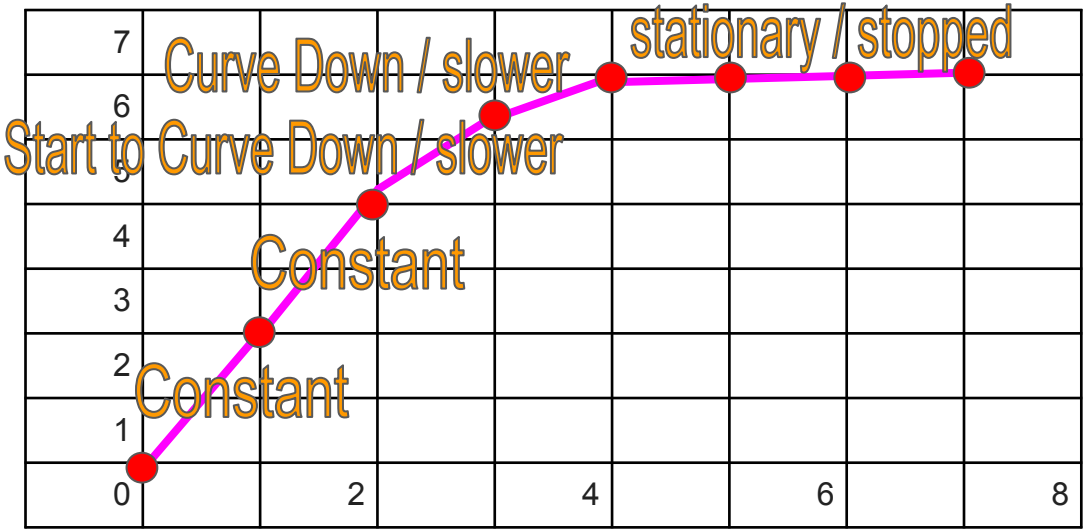

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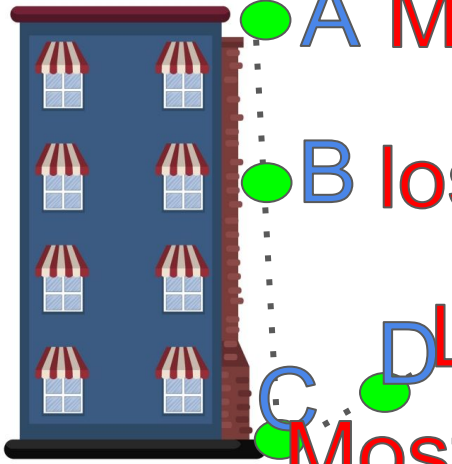
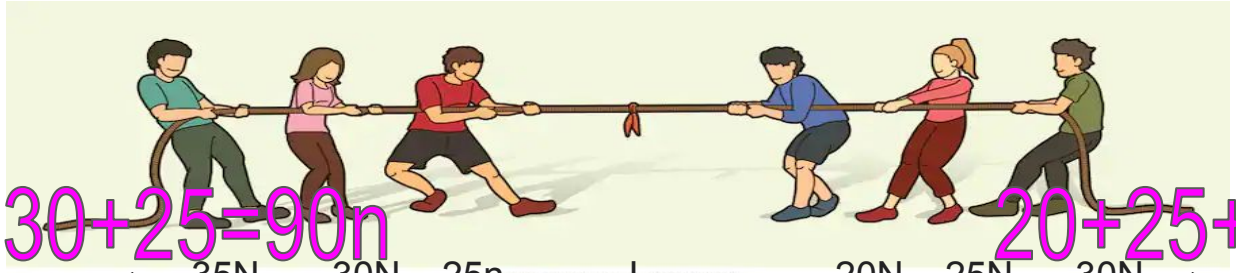


At which position will the ball have the greatest potential Energy?

? A: A ~~C: C~~

~~B: B~~ ~~D: D~~

8. During PE class, a group of student splayed tug-of-war . In the game, students on each team pulled with the amount of force shown in the diagram below.



35+30+25=90n

20+25+30=75n

← 35N 30N 25n | 20N 25N 30N →

West / Team 1

90-75=15n to the west

East / Team 2

Based on the diagram in which direction will the center of the rope move?

? A: the center of the rope will move to the west because the net force is greater in this direction.

~~B: The center of the rope will move to the east because the net force is greater in the direction~~

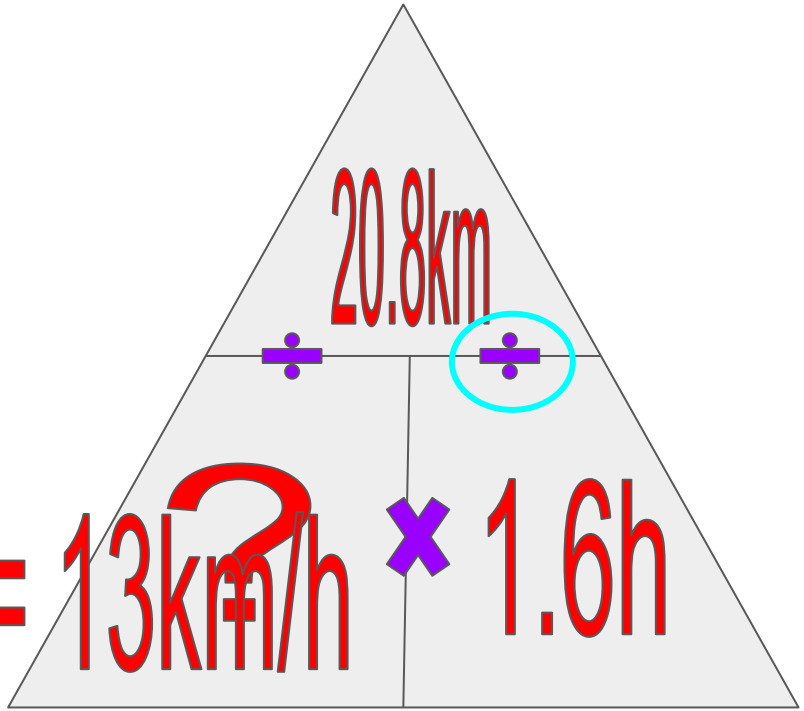
~~C: The center of the rope will move to the west because the net force is less in this direction~~

~~D: the center of the rope will not move because the net force is zero~~

distance

time

	1	3	.		
0	0	0		0	0
1	●	1		1	1
2	2	2		2	2
3	3	●		3	3
4	4	4		4	4
5	5	5		5	5
6	6	6		6	6
7	7	7		7	7
8	8	8		8	8
9	9	9		9	9



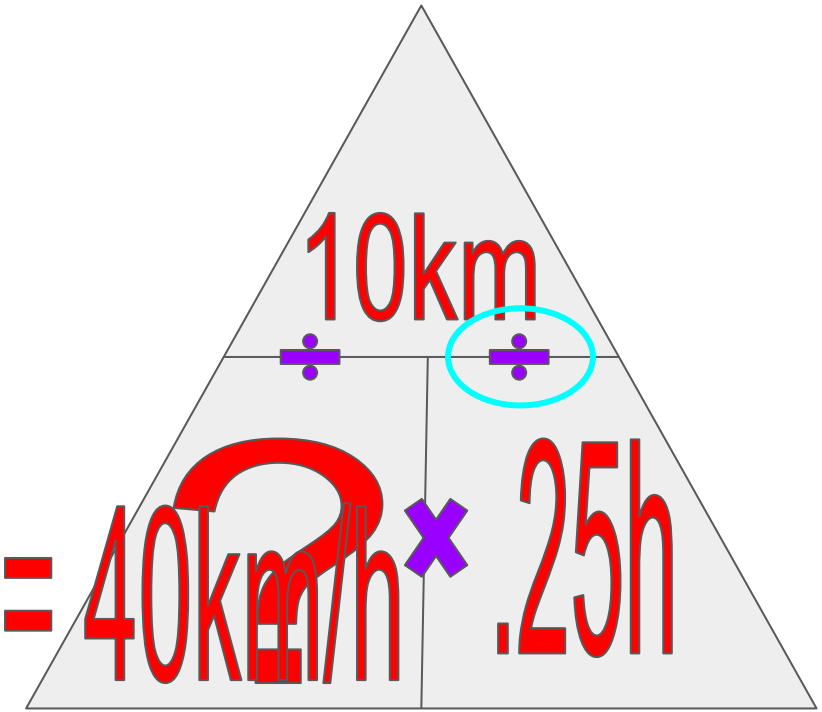
20.8 / 1.6 = 13km/h

10. Sharks are built for speed because they need to swim fast enough to catch their prey. What was the average speed of a great white shark that swam 10 kilometers in .25 hours?

distance

time

	40	.		
0	0	●	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	●	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9



10 / .25 = 40km/h × .25h