

Physics 11 Unit 1 - Kinematics, Displacement, Change in Velocity - Worksheet #2

Name: _____

1. A car takes 46 mins to drive 72 km to Kamloops. How fast is the car going?

2. A runner travels at 7.7 m/s for 1 min. How far does the runner travel?

3. A plane travels to Vancouver (390 km to the airport) at a speed of 350 km/hr. How long does the trip take?

4. Convert 95 km/hr to m/s (Show your working)

5. How many seconds are in 1.2 hours? (Show your working)

6. Convert 23 m/s into km/hr (Show your working)

7. How many meters in 1.5 km? (Show your working)

8. A woman walks 20 m North and then 11 m South. Find the total distance travelled and the (resultant) displacement.

9. Mr. Coates walks 5 steps forward (+) and 3 steps backwards (-), find the total distance travelled and the displacement.

10. Mr. Coates walks 12 steps North and then 9 steps West. Find the total distance travelled and the displacement.

11. A boat crosses a river with a speed of 10 m/s directly across the river. The speed of the current is 4 m/s. Find the resultant velocity of the boat.

12. A boat crosses a 90 m wide river with a speed of 17 m/s across the river. The speed of the river is 3 m/s.

a) How long does it take the boat to cross the river?

b) How far down the river does the boat drift?

13. A boat travelling at 10 m/s wants to cross a 60 m river with a current of 3 m/s and not drift down stream at all.

At what angle must the boat point up stream?

How long does it take the boat to cross the river?

14. A car is travelling at 25 m/s and slows to 20 m/s. Find the change in velocity.
15. A car is travelling at 25 m/s and accelerates to 30 m/s. Find the change in velocity.
16. A car is travelling North at 25 m/s and after colliding with a truck is travelling 10 m/s south. Find the change in velocity.

17. A ball is thrown at 12 m/s and sticks to the wall upon impact. Find the change in velocity.

18. A ball is thrown at 13 m/s and bounces off the wall at 8 m/s. Find the change in velocity.