



## Problems

## Distance, Velocity, and Time Problems

Zoe drove from her home to her lake cabin. She drove at 60 miles per hour (mph) before stopping at a gas station. After leaving the gas station, she drove 5 mph faster. The total distance she traveled was 160 miles, and she drove for 2.5 hours. How far was it from her home to the gas station where she stopped?

**Answer:** A. 30 miles

$x$  is the time in hours to get from her home to the gas station.  
 $(2.5 - x)$  is the time to get from the gas station to the cabin.

Use  $d = vt$ .

$$60x + 65(2.5 - x) = 160 \quad \text{sum of two segments of trip = total distance}$$

$$60x + 162.5 - 65x = 160$$

$$-5x = -2.5$$

$$x = 0.5 \quad \text{hours from home to the gas station.}$$

Use  $d = vt$ .

$$(60)(0.5) = 30 \text{ miles from home to the gas station}$$

OK



Math Facts



Hint



Solution



Return to  
Quick Reference