These numbers satisfy a directly proportional relationship. They need to satisfy an inverse variation equation: $t = \dfrac{k}{r}$ or $t \cdot r = k$.

The first two numbers give you $10 \cdot 40 = 400$, while the second two numbers give you $15 \cdot 60 = 900$. Because k is not the same, the relationship is not inversely proportional. The correct answer is 50 mph for 8 hours and 40 mph for 10 hours.