

$$\text{individual work rate} \times \text{together time} = \text{work done}$$

Key

1. It takes Efram 11 hours to spread mulch in his yard if he does it alone. If Efram started at 6 am and worked alone until 10 am (when Rohan finally decided to wake up and help). Once Rohan joined him they were able to finish the job in 3 hours. How long would it have taken Rohan to do the job alone?

8.25 hours

2. Joanne needs to wash, and clean out, her car before her Spring Break trip. It is really dirty, so it will take her 12 hours to get the job done alone. Since Karsyn is riding with Joanne, she thinks that it would be nice of her to help her clean her car. It would take Karsyn 10 hours to clean Joanne's car alone. If Joanne starts at 8am and Karsyn comes to help her at noon, how long will it take the two of them to finish cleaning the car?

3.64 hours

3. One pump can empty the town swimming pool in 7 hours less time than a smaller second pump can. Together they can empty the pool in 12 hours. How much time would it take the larger pump to empty it?

21 hours

4. Taylor can paint her room in 12 hours by herself, but it takes Cailey 15 hours to do the same job. Taylor starts the job alone and Cailey joins her 5 hours later. How long will it take the two of them together to finish painting Taylor's room?

3.9 hours

5. Jackson has volunteered to paint the tennis courts. If he does the job alone it will take him 6 hours. He was supposed to do it last weekend but was hanging out in Florida instead. He has promised the coach he will get it done this weekend, but really wants to go to the mall with Aiden. If he does it alone he won't have time to go to the mall. Aiden has agreed to help him because he knows that if they do the job together it will only take them $2 \frac{2}{5}$ hours to paint the courts and he missed Jackson last weekend and wants to hang out at the mall. How long will it take Aiden to do the job alone if Jackson decides to be a no show?

4 hours