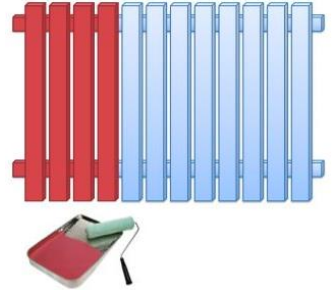


# Unit 5 Problem Set

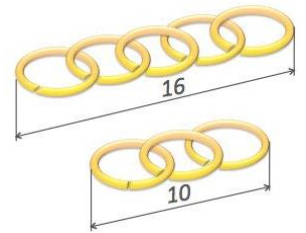
3 marks each + 3 marks for proper mathematical form

/15

1. It takes Kevin 30 minutes to paint a fence while it takes Vivian 20 minutes to paint the same fence. How long would it have taken to paint the same fence if they had worked together?



2. A chain with 3 links is 10 cm long. A chain made with 5 links of the same type is 16 cm long. How long is a chain with 35 links?



3.  $F = (x - a)(x - b)(x - c)(x - d) \dots (x - w)(x - x)(x - y)(x - z)$  for  $a, b, c, \dots, z \in \mathbb{R}$ . Calculate  $F$ .

4. Dante B Late has a clock that gains exactly 12 minutes per hour. Just before leaving for work at 5:30 a.m., Dante set the clock to the correct time. Dante returned home for lunch and while eating glanced over at the clock. The clock read 1:30 p.m. At first Dante was concerned, knowing that he should have left the house at 12:30 p.m. in order to return to work on time. But then he remembered the clock's peculiar feature.



How much time does Dante have left at home before he needs to leave to return to work?