# Understanding Unit Rate

Name: _____

**Solve each problem.**

**1)** A carpenter used $\frac{1}{2}$ of a box of nails while working on a birdhouse and was able to finish $\frac{1}{3}$ of it. At this rate, how many boxes will he need to finish the entire birdhouse?

**2)** A pencil making machine took $\frac{1}{2}$ of a second to make enough pencils to fill $\frac{1}{3}$ of a box. At this rate, how long would it take the machine to fill the entire box?

**3)** A discount bottle of perfume was $\frac{1}{2}$ of a liter. That was enough to fill $\frac{1}{3}$ of a jug. How many bottles of perfume would you need to fill the entire jug?

**4)** An old potato outputs $\frac{1}{2}$ of a volt of electricty, which is $\frac{1}{3}$ the amount of power needed for a small lightbulb. How many potatoes would you need to power the lightbulb?

**5)** A basket of lemons weighed $\frac{1}{2}$ of a pound and could make a cup of lemonaide that was $\frac{1}{3}$ full. How many baskets of lemons would you need to fill up the entire cup?

**6)** A snail going full speed was taking $\frac{1}{2}$ of a minute to move $\frac{1}{3}$ of a centimeter. At this rate, how long would it take the snail to travel a centimeter?

**7)** A bag of grass seeds weighed $\frac{1}{2}$ of a kilogram. That was enough to cover $\frac{1}{3}$ of a front lawn with seed. How many bags would it take to completely cover a lawn?

**8)** A water hose had filled up $\frac{1}{3}$ of a pool after $\frac{1}{2}$ of an hour. At this rate, how many hours would it take to fill the pool?

**9)** A container of gasoline that held $\frac{1}{2}$ of a liter could fill up $\frac{1}{3}$ of a motorcycle gas tank. How many containers would you need to fill up the gas tank entirely?

**10)** A bag of chocolate mix that weighed $\frac{1}{2}$ of a kilogram could make enough brownies to feed $\frac{1}{3}$ of the students at school. How many bags would be needed to feed all of the students?

**Math**

| 1-10 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 | 10 | 0 |
|------|----|----|----|----|----|----|----|----|----|---|

Name:

**Solve each problem.**

**Answers**

**1)** A carpenter used $\frac{1}{2}$ of a box of nails while working on a birdhouse and was able to finish $\frac{1}{3}$ of it. At this rate, how many boxes will he need to finish the entire birdhouse?

1. **$1\frac{1}{2}$ boxes**

**2)** A pencil making machine took $\frac{1}{2}$ of a second to make enough pencils to fill $\frac{1}{3}$ of a box. At this rate, how long would it take the machine to fill the entire box?

2. **$1\frac{1}{2}$ seconds**

**3)** A discount bottle of perfume was $\frac{1}{2}$ of a liter. That was enough to fill $\frac{1}{3}$ of a jug. How many bottles of perfume would you need to fill the entire jug?

3. **3 bottles**

4. **3 potatoes**

**4)** An old potato outputs $\frac{1}{2}$ of a volt of electricty, which is $\frac{1}{3}$ the amount of power needed for a small lightbulb. How many potatoes would you need to power the lightbulb?

5. **3 baskets**

6. **$1\frac{1}{2}$ minutes**

**5)** A basket of lemons weighed $\frac{1}{2}$ of a pound and could make a cup of lemonaide that was $\frac{1}{3}$ full. How many baskets of lemons would you need to fill up the entire cup?

7. **3 bags**

8. **$1\frac{1}{2}$ hours**

**6)** A snail going full speed was taking $\frac{1}{2}$ of a minute to move $\frac{1}{3}$ of a centimeter. At this rate, how long would it take the snail to travel a centimeter?

9. **3 containers**

10. **3 bags**

**7)** A bag of grass seeds weighed $\frac{1}{2}$ of a kilogram. That was enough to cover $\frac{1}{3}$ of a front lawn with seed. How many bags would it take to completely cover a lawn?

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1-10 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 | 10 | 0

**Math**