

BE - Precalc | Monday 4-19-10

- ① Kim can oil the lanes in a bowling Alley in NINE hours. Nicole can oil the same lanes in ten hours. If they worked together, how long would it take them?
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1.
BE $\Rightarrow$ example of a "WORK" problem

To solve, find each "RATE" of doing work. Add to get combined "RATE".
Use combined rate to answer any question.

$$\textcircled{BE} \text{ Kim} \Rightarrow \frac{1 \text{ bowling alley}}{9 \text{ hours}} = \frac{1}{9} \frac{A}{HR}$$

$$\text{NICOLE} \Rightarrow \frac{1 \text{ bowling alley}}{10 \text{ hours}} = \frac{1}{10} \frac{A}{hr}$$

$$\text{Together} \Rightarrow \frac{1}{9} + \frac{1}{10}$$
$$\frac{10}{90} + \frac{9}{90} = \frac{19}{90} \frac{A}{HR}$$

How long to oil 1 Alley? $\overset{or}{=} \frac{90}{19} \frac{Hrs}{A}$

$\uparrow$
we HOURS
Alley

$\approx$ $\frac{90}{19} \approx 4.74 \text{ hrs}$
 $\frac{90}{19} \approx 4.736$

$$\Rightarrow \frac{90}{19} \frac{hrs}{Alley} \cdot 1 \text{ Alley} = \frac{90}{19} \text{ hours}$$

$\frac{90}{19} \cdot 74 = \frac{74}{100} \cdot \frac{3}{5} = \frac{222}{5} = 44.5 \text{ min} \approx 4 \text{ hr } 45 \text{ min}$

$\frac{90}{19} \cdot 74 = \frac{90 \cdot 74}{19} = \frac{6660}{19} = 350.526 \approx 351$

Practice - Work Problems

Date _____ Period _____

Solve each question. Round your answer to the nearest hundredth.

- 1) Kim can oil the lanes in a bowling alley in nine hours. Nicole can oil the same lanes in ten hours. If they worked together how long would it take them?
- 2) Working alone, Arjun can clean an attic in 15 hours. Julia can clean the same attic in 11 hours. How long would it take them if they worked together?
- 3) Working alone, it takes Mofor 11 hours to mop a warehouse. Castel can mop the same warehouse in 8 hours. If they worked together how long would it take them?
- 4) Dan can clean an attic in 14 hours. Ndiba can clean the same attic in 12 hours. If they worked together how long would it take them?
- 5) Molly can harvest a field in 16 hours. Jacob can harvest the same field in 15 hours. Find how long it would take them if they worked together.
- 6) Jessica can pick forty bushels of apples in 14 hours. Stephanie can pick the same amount in 13 hours. How long would it take them if they worked together?
- 7) It takes Shayna 11 hours to mop a warehouse. Ryan can mop the same warehouse in 9 hours. Find how long it would take them if they worked together.
- 8) Working alone, it takes Eugene 14 minutes to sweep a porch. Chelsea can sweep the same porch in 15 minutes. Find how long it would take them if they worked together.
- 9) Working alone, it takes Amanda 15.2 hours to clean an attic. Abhasra can clean the same attic in 15.4 hours. How long would it take them if they worked together?
- 10) Working alone, it takes Kristin 11.4 hours to clean an attic. Sumalee can clean the same attic in 9.4 hours. Find how long it would take them if they worked together.