

Back of purple sheet

Jun 13

Rate of Work Problems

1. Ahmed takes 2 hrs to mow lawn.

Samir takes 4 hrs.

Ahmed mows $\frac{1}{2}$ lawn in 1 hr

Samir mows $\frac{1}{4}$ lawn in 1 hr

3. Given: Julio fills tank in 4min
 with large hose. It takes 6min
 with smaller hose.
 Find: how long to fill tank with
 both hoses.

Let x = the combined time

$$\frac{3x}{4 \times 3} + \frac{2x}{6 \times 2} = \frac{1 \times 12}{1 \times 12}$$

$$\begin{aligned} 5x &= 12 \\ 5x &= 12 \\ x &= 2.4 \end{aligned}$$

Given
9. Mary takes 3h to do task and
Jim and Mary take 2h together
Find: How long does it take Jim
to do the task by himself.

Let x = Jim's time

$$\frac{2x}{3x} + \frac{2x}{3x} = \frac{1 \times 3x}{1 \times 3x}$$
$$2x + 6 = 3x - 2x$$

$6 = x$
Jim
takes
6h by
himself.

5. Murray can tile floor in 1h. His partner can do the same job in half the time

Find: how long Together

Let x = combined time

$$\frac{x^{0.5}}{1 \times 0.5} + \frac{x}{1 \times 0.5} = \frac{1 \times 0.5}{1 \times 0.5}$$

$$0.5x + x = 0.5$$

$$1.5x = 0.5$$

$$x = 0.3 \times 60$$
$$x = 18 \text{ min}$$

p.15 Exponents, Powers and Variables.

1. 5^3

$\nwarrow$ base

$\leftarrow$ exponent

5. $3 \times 3 \times 3 \times 3 \times 3$

$= 3^5$

$$11. \quad 5^2$$

$$= 5 \times 5$$

$$17. \quad 5x^3$$

$$= 5 \times x \times x \times x$$

$$5(x)(x)(x)$$

$$19 \quad 3^4 = 81$$

p. 15

$$49. \quad 7^2 + 3^2$$

$$= 49 + 9$$

$$= 58$$

$$57. \quad 7^2 + 3^3$$

$$= 49 + 27$$

$$= 76$$

BE DMAS!

Rate of Work - back of
purple sheet

p. 15 exponents + powers

Exam review package.