3. A typical song downloaded from the Internet is 4 megabytes in size. Lindy has satellite Internet, and her computer downloads music at a rate of 256 kilobytes per second. If 1 megabyte equals 1,024 kilobytes, about how many songs can Lindy download in 2 hours?

A) 128
B) 450
C) 1,800
D) 1,920

1 song = 4 mb

1 sec = 256 kb

1 mb = 1024 kb

$$\frac{2\ \text{hr}}{1}\cdot\frac{60\ \text{min}}{1\ \text{hr}}\cdot\frac{60\ \text{sec}}{1\ \text{min}}\cdot\frac{256\ \text{kb}}{1\ \text{sec}}\cdot\frac{1\ \text{mb}}{1024\ \text{kb}}\cdot\frac{1\ \text{s}}{4\ \text{mb}}$$

$$= \frac{2\cdot 60\cdot 60\cdot 256}{1024\cdot 4} = 450$$

3 desks = 2 chairs

5 chairs = 2 tables

7 tables ⟶ desks?

$\frac{3d}{2\cancel{c}} \cdot \frac{5\cancel{c}}{2\cancel{t}} \cdot \frac{7\cancel{t}}{?d} =$

$\frac{105}{4} = 26$ des

26.25

4. A subway car passes 3 stations every 10 minutes. At this rate, how many stations will it pass in 1 hour?

10 min = 3 stations

60 min = 18 stations

$$\frac{1\ \text{hr}}{1} \cdot \frac{60\ \text{min}}{1\ \text{hr}} \cdot \frac{3\ \text{s}}{10\ \text{min}} = \frac{180}{10}\ \text{s}$$

5. Cecilia leaves home for school on her bike at 9:05 AM, riding at an average speed of 10 miles per hour. Fifteen minutes later, her mother realizes that Cecilia forgot to take her lunch. Cecilia's mother immediately gets into her car and drives after Cecilia at an average speed of 25 miles per hour. At what time will Cecilia's mom catch up to her?

A) 9:15 AM

B) 9:20 AM

C) 9:26 AM

D) 9:30 AM

9:05AM 10 mph

$D = 10t$

9:20AM 25mph

CM

$D = sp \cdot t$ $D = 25(t - \frac{1}{4})$

$10t = 25t - \frac{25}{4}$

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