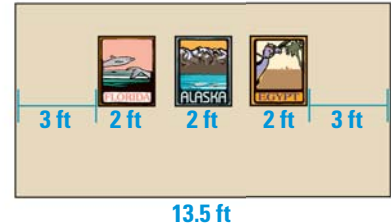38. BASKETBALL A ticket agency sells tickets to a professional basketball game. The agency charges $32.50 for each ticket, a convenience charge of $3.30 for each ticket, and a processing fee of $5.90 for the entire order. The total charge for an order is $220.70. How many tickets were purchased?

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39. HANGING POSTERS You want to hang 3 equally-sized travel posters on the wall in your room so that the posters on the ends are each 3 feet from the end of the wall. You want the spacing between posters to be equal. How much space should you leave between the posters?

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3 ft | 2 ft | 2 ft | 2 ft | 3 ft

13.5 ft

40. LIFEGUARD TRAINING To qualify for a lifeguard training course, you have to swim continuously for 500 yards using either the front crawl or the breaststroke. You swim the front crawl at a rate of 45 yards per minute and the breaststroke at a rate of 35 yards per minute. You take 12 minutes to swim 500 yards. How much time did you spend swimming the front crawl? Use the verbal model below.

$$\text{Distance} = \boxed{\begin{array}{c}\text{Rate for} \\ \text{front} \\ \text{crawl}\end{array}} \cdot \boxed{\begin{array}{c}\text{Time} \\ \text{for front} \\ \text{crawl}\end{array}} + \boxed{\begin{array}{c}\text{Rate for} \\ \text{breaststroke}\end{array}} \left(\boxed{\begin{array}{c}\text{Total} \\ \text{time}\end{array}} - \boxed{\begin{array}{c}\text{Time} \\ \text{for front} \\ \text{crawl}\end{array}} \right)$$

41. TAKS REASONING The Busk-Ivanhoe Tunnel on the Colorado Midland Railway was built in the 1890s with separate work crews starting on opposite ends at different times. The crew working from Ivanhoe started 0.75 month later than the crew working from Busk.

Ivanhoe crews completed 115 feet per month.
Busk crews completed 137 feet per month.

Cutaway of Busk-Ivanhoe Tunnel

a. Starting at the time construction began on the Busk end, find the time it took to complete a total of 8473 feet of the tunnel. Round your answer to the nearest month.

b. After 8473 feet were completed, the work crews merged under the same supervision. The combined crew took 3 months to complete the remaining 921 feet of the tunnel. Find the rate at which the remainder of the tunnel was completed.

c. Was the tunnel being completed more rapidly before or after the work crews merged? *Explain* your reasoning.

○ = **WORKED-OUT SOLUTIONS**
on p. WS1

= **TAKS PRACTICE AND REASONING**

◆ = **MULTIPLE REPRESENTATIONS**