## DIRECTIONS: Solve.

- 1.  $\frac{5}{16}$  of  $\frac{4}{5}$  of a number is 15. Find the number.
- 2. 12 is  $\frac{3}{5}$  of  $\frac{10}{21}$  of a number. Find the number.
- **3.** 30 is 20% of 30% of a number. Find the number.
- **4.** 75% of 60% of a number is 36. Find the number.
- Pump A can unload the petroleum from a ship in 30 hours and Pump B can unload it in 24 hours. Because of an approaching storm, both pumps were used on a certain ship. How long did they take (together) to empty the ship?
- **6.** An old conveyor belt takes 21 hours to move one day's coal output from the mine to the rail line. A new belt can do it in 15 hours. How long does it take when both are used at the same time?

- **7.** How much pure antifreeze must be added to 12 liters of a 40% solution of antifreeze to obtain a 60% solution of antifreeze?
- **8.** How much water must be evaporated from a 300-liter tank of a 2% salt solution to obtain a 5% solution?
- **9.** A pharmacist wishes to make 1.8 liters of a 10% solution of boric acid by mixing 7.5% and 12% solutions. How much of each type of solution should be used?
- **10.** How much of an 18% solution of sulfuric acid should be added to 360 mL of a 10% solution to obtain a 15% solution?
- 11. The county's new asphalt paving machine can surface 1 km of highway in 10 hours. A much older machine can surface 1 km in 18 hours. How long will it take them to surface 21 km of highway if they start at opposite ends and work day and night?
- **12.** Pipes A and B can fill a storage tank in 8 hours and 12 hours, respectively. With the tank empty, Pipe A was turned on at noon, and then Pipe B was turned on at 1:30 P.M. At what time will the tank be full?