

EXAMPLE II.—If 3 horses can draw 10 tons, how many horses will be required to draw 30 tons?

OPERATION.

horses	horses	tons	tons
3	:	x	:: 10 : 30
1st cause		2d cause	1st effect 2d effect
$10x = 3 \times 30$			
$x = \frac{3 \times 30}{10}$			
$x = 9 \text{ horses.}$			

EXPLANATION.—

The horses are the causes; the tons are the effects; and the 1st cause is to the 2d cause as the 1st effect is to the 2d effect. The product of the means is equal to the product of the extremes. Solving, $x = 9$ horses.

Written Problems.

1. If 8 volumes of a work cost \$36, find the cost per dozen.
2. If 100 bu. of wheat cost \$96, how much must be paid for 75 bushels of the same kind of wheat?
3. If 35 acres of a field will produce 875 bu. of wheat, how many bushels of wheat will 87 acres of the same field produce?
4. If 4 bbl. of flour can be made from 18 bu. of wheat, how many barrels of flour can be made from 207 bu. of wheat?
5. If a locomotive vaporizes 1 200 gal. of water in running 90 mi., how many gallons of water will be required for a 300-mile trip?
6. If 20 lb. of cream make 4 lb. of butter, how much cream will be required for 180 lb. of butter?
7. A stick 5 ft. high casts a shadow of 2 ft. How high is a tree which, at the same time, casts a shadow of 36 ft.?
8. If for cattle, 55 lb. of potatoes have the same nutritive value as 60 lbs. of beets, how many pounds of beets should I take to replace 8 800 lb. of potatoes?
9. A farm boy was to receive \$50 for 60 days' work. What is due him if he leaves after 9 days?