

Rule To measure the heights of Trees Chim- neys Steeples or any thing of that kind;

First you must have a Staff of any Certain length and set your Staff down by the Tree so that the Shade of the Staff will be straight with the Shadow of the Tree then measure the Shadow of your Staff then, Measure the Shade of the Tree; Then State and say if the Shadow of the Staff becomes the length of the Staff what will the Shade of the Tree become. State it by the Single rule of Three Direct and in so working you will find the height of the Tree, Some persons would suppose this rule to be little strange but to ^{take} a right Consideration of it, it is not so strange a thing for we will suppose the Sun not always to be of one height so for that reason the Shade of the Trees is not always of one length, neither is the Shade of your Staff always of one length for in the Morning or evening the Shade of the Tree and Staff will both be long and at the middle of the day they both will be short so by that reason when one is long the other is long and when one is short the other is so likewise and the Staff is always of one length of feet which is always the middle number which will make your Answer always feet if you work it by the Single rule of Three Direct, for the first & third must be of one name and the Answer of the must be of the same name of the middle number. 86 86

Examples

Measuring

If the shadow of a pole or rod be 4 feet long when a 3 foot Staff the shade is 1 foot long how long is that pole or rod Demand

If	4	Staff	Shade	pole
If	1	3	1	4
				<u>4</u>
				<u>1512</u>
				<u>12</u> feet Answer

If the shade of a Tree be 200 feet long when the shade of a 4 foot Staff is 9 feet long how many feet long is that Tree Demand &c

If	Shade	Staff	Tree
If	9	4	200
			<u>200</u>
			<u>9</u> 800
			<u>88</u> $\frac{8}{9}$ Answer

If the shade of a staff that is 4 feet long be 12 feet long, and the shade of a Tree be 300 feet long how many feet long is that Tree Demand August 6th day 1793

If	Shade	Staff	Shade
If	12	4	300
			<u>300</u>
			<u>12</u> 1200
			<u>100</u> feet Answer

If the shadow of a staff that is 5 feet long be 15 feet long how long will a Tree be by the same staff that the shade is 250 feet long — Demand

If	Shade	Staff	Shade
If	15	5	250
			<u>250</u>
			<u>3</u> 1250
			<u>5</u> 413 $\frac{1}{3}$
			Answer feet <u>82</u> $\frac{10}{15}$ or $\frac{2}{3}$

How long will a Tree be that is 300 foot shade by a staff 5 feet when the shade is 25 feet long — Demand

Shade	Staff	Shade
If	25	5
		<u>300</u>
		<u>5</u> 1500
		<u>5</u> 300
		<u>60</u> feet Answer

If the shade of a staff is 2 feet long when the staff is 6 long how long will a Tree be that is 85 feet shade &c

If	6	2	85
			<u>85</u>
			<u>6</u> 170
			<u>28</u> $\frac{2}{6}$ or $\frac{1}{3}$ Answer

Measuring

How many feet long will a Tree be that the Shade is 150 feet long by a Staff 6 feet long and the Shade 12 feet long Demand

If Shade	Staff	Shade
If 12 "	6 "	150
	<u>150</u>	
12	<u>900</u>	
	<u>75</u>	Answer

If the Shade of a Tree be 75 feet long when the Shade of a 6 foot Staff is 2 foot long how many feet long is that Tree Demand

If Shade	Staff	Shade
If 2 "	6 "	75
	<u>75</u>	
2	<u>450</u>	
	<u>225</u>	feet Answer

Suppose the Shadow of a Staff that is 6 feet long to be 3 how many feet long will a Tree be that is 85 feet Shade by the same Staff to state it by the single rule of Three Demd

Shade	Staff	Shade
If 3 "	6 "	85
	<u>85</u>	
3	<u>510</u>	
	<u>170</u>	feet Answer

Shade	feet	Shade
If 85	170 "	3
	<u>3</u>	
85	<u>510</u>	6 Proof
	<u>510</u>	

Suppose a Tree to have a Shade 300 feet long how many feet will that Tree be to measure it by a Six foot Staff when the Shade of the Staff is 30 feet long Demd and proof

If Shade	Staff	Shade
If 30 "	6 "	300
	<u>300</u>	
30	<u>1800</u>	
	<u>60</u>	feet Answer

Shade	feet	Shade
If 300 "	60 "	30
	<u>30</u>	
300	<u>1800</u>	
	<u>6</u>	Proof