Names: _____ **Date:** _____

Cost Comparisons Worksheet

1. **To estimate the cost of different length girders in concrete and steel,** complete the table below. Show all your work and calculations. Use the following information to complete your calculations:
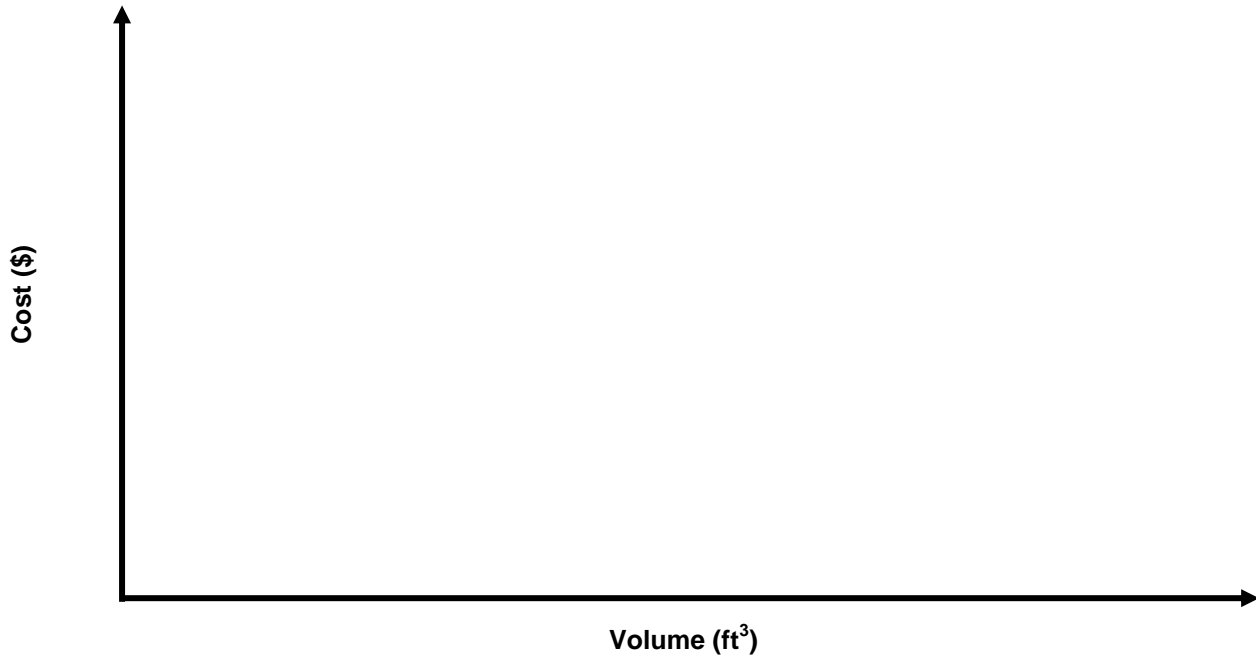
       1 cubic yard of concrete = 27 cubic feet of concrete

       1 ton of steel = 4.08 cubic feet of steel

B	L	Length	Volume = B x L x Length	Volume (cu.yd.) = ft³ ÷ 27	Cost of Concrete	Total Cost Using Concrete	Volume (tons) = ft³ ÷ 4.08	Cost of Steel	Total Cost Using Steel
1 ft	1 ft	20 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	2 ft	20 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	3 ft	20 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	4 ft	20 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	5 ft	20 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	1 ft	40 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	2 ft	40 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	3 ft	40 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	4 ft	40 ft			$65.10 per cubic yard			$2,000 per ton	
1 ft	5 ft	40 ft			$65.10 per cubic yard			$2,000 per ton	

2. Create two graphs below, using information from the table.

Total Cost Using Concrete

Cost ($)

Volume (ft^3)

Total Cost Using Steel

Cost ($)

Volume (ft^3)