Assignment	Code:
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Name.

Period: _____

Falling Fast

A stone rolls off a 150 m cliff. The partially completed table below shows the distance fallen and the velocity of the stone for the first few seconds of its fall.

Time (s)	Accelerati on (m/s²)	Velocity reached at the end of each second (m/s)	Distance fallen during this second (m)	Total distance fallen by the stone (m)
0	9.8 m/s²	0	-	-
End of second 1	9.8 m/s²	v= 9.8 x 1= 9.8 m/s	4.9 m	4.9 m
End of second 2	9.8 m/s²	v= 9.8 x 2= 19.6 m/s	4.9 + 9.8 = 14.7 m	4.9 + 14.7 = 19.6 m
End of second 3		v= 9.8 x 3= 29.4 m/s	4.9 + 9.8 + 9.8 = 24.5 m	19.6 + 24.5 = 44.1 m
End of second 4			4.9 + (9.8 x 3) = 34.3 m	
End of second 5				
End of second 6				

- 1. Complete the table.
- 2. Approximately when will the stone hit the ground? Explain your reasoning.

3. If a much heavier stone rolled off the same cliff, would it hit the ground more quickly? Explain your reasoning.