

- 69.** 66 km, 46° south of east
71. 10.7 m
73. 3.0 s
75. 76.9 km/h, 60.1° west of north
77. 7.0×10^2 m, 3.8° above the horizontal
79. 47.2 m
81. 6.36 m/s
83. 13.6 km/h, 73° south of east
85. 58 N
87. 14.0 N; 2.0 N
89. 9.5×10^4 kg
91. 258 N, up the slope
93. 15.9 N
95. 2.0 m/s^2
97. $F_x = 8.60 \text{ N}$; $F_y = 12.3 \text{ N}$
99. $-448 \text{ m/s}^2 = 448 \text{ m/s}^2$, backward
101. 15 kg
103. 0.085
105. $1.7 \times 10^8 \text{ N}$
107. 24 N, downhill
109. $1.150 \times 10^3 \text{ N}$
111. $1.2 \times 10^4 \text{ N}$
113. 0.60
115. 38.0 m
117. $2.5 \times 10^4 \text{ J}$
119. 247 m/s
121. $-5.46 \times 10^4 \text{ J}$
123. $3.35 \times 10^6 \text{ J}$
125. 1.23 J
127. 12 s
129. 0.600 m
131. 133 J
133. 53.3 m/s
135. 72.2 m
137. 0.13 m = 13 cm
139. 7.7 m/s
141. 8.0 s
143. 230 J
145. 7.96 m
147. $6.0 \times 10^1 \text{ m/s}$
149. $1.58 \times 10^3 \text{ kg} \cdot \text{m/s}$, north
151. $3.38 \times 10^{31} \text{ kg}$
153. 18 s
155. 637 m, to the right
157. 7.5 g
159. 0.0 m/s
161. -5.0×10^1 percent
163. 16.4 m/s, west
165. $5.33 \times 10^7 \text{ kg} \cdot \text{m/s}$
167. $1.0 \times 10^1 \text{ m/s}$
169. 560 N, east
171. $-3.3 \times 10^8 \text{ N} = 3.3 \times 10^8 \text{ N}$, backward
173. 52 m
175. 24 kg
177. 90.6 km/h, east
179. 26 km/h, 37° north of east
181. -157 J
183. 0.125 kg
185. $-4.1 \times 10^4 \text{ J}$
187. 9.8 kg
189. 1.0 m/s, 60° south of east
191. $4.04 \times 10^3 \text{ m/s}^2$
193. 42 m/s
195. 8.9 kg
197. $1.04 \times 10^4 \text{ m/s} = 10.4 \text{ km/s}$
199. $1.48 \times 10^{23} \text{ kg}$
201. $1.10 \times 10^{12} \text{ m}$
203. $6.6 \times 10^3 \text{ m/s} = 6.6 \text{ km/s}$
205. 0.87 m
207. 254 N
209. 0.42 m = 42 cm
211. 25 N
213. 165 kg
215. $5.09 \times 10^5 \text{ s} = 141 \text{ h}$
217. $5.5 \times 10^9 \text{ m} = 5.5 \times 10^6 \text{ km}$
219. 1.6 N·m
221. $6.62 \times 10^3 \text{ N}$
223. 0.574 m
225. $8.13 \times 10^{-3} \text{ m}^2$
227. $2.25 \times 10^4 \text{ kg/m}^3$
229. $2.0 \times 10^1 \text{ m}^2$
231. 4.30 kg
233. 374°F to -292°F
235. $6.6 \times 10^{-2} \text{ }^\circ\text{C}$
237. $1.29 \times 10^4 \text{ J}$
239. $4.1 \times 10^{-2} \text{ kg}$
241. $1.200 \times 10^3 \text{ }^\circ\text{C}$
243. 315 K
245. $1.91 \times 10^{-2} \text{ kg} = 19.1 \text{ g}$
247. 530 J/kg·°C
249. -930°C
251. $1.50 \times 10^3 \text{ Pa} = 1.50 \text{ kPa}$
253. 873 J
255. 244 J
257. $5.3 \times 10^3 \text{ J}$
259. $2.4 \times 10^3 \text{ Pa} = 2.4 \text{ kPa}$
261. 5895 J
263. $5.30 \times 10^2 \text{ kJ} = 5.30 \times 10^5 \text{ J}$
265. $1.0 \times 10^4 \text{ J}$
267. -18 N
269. -0.11 m = -11 cm
271. $4.0 \times 10^{-2} \text{ m} = 4.0 \text{ cm}$
273. 0.2003 Hz
275. 730 N/m
277. $1.4 \times 10^3 \text{ m/s}$
279. $2.2 \times 10^4 \text{ Hz}$
281. $8.6 \times 10^3 \text{ N/m}$
283. 3.177 s
285. 82 kg
287. 1.2 s
289. $1.5 \times 10^3 \text{ m/s}$
291. 1.1 W/m^2
293. 294 Hz
295. 408 m/s
297. 0.155 m
299. 0.211 m = 21.1 cm
301. $2.9971 \times 10^8 \text{ m/s}$
303. $3.2 \times 10^{-7} \text{ m} = 320 \text{ nm}$
305. -0.96 cm
307. -1.9 cm
309. 3.8 m
311. 0.25
313. 38 cm