

Name: _____

Date: _____

[20 pt] 1. Answer each of the following questions. ALL answers should contain the proper number of Significant Figures and the proper Units. Show work to receive full credit.

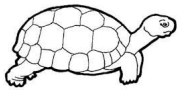
(a) A velociraptor runs 12 miles/hour. How long (in minutes) will it take a 1(a) _____ velociraptor to travel 800. miles?



(b) A wolf can run 3.0 feet/sec, how far (in miles) can a wolf run in 2.0 hours? 1(b) _____



(c) A tortoise drinks 2.0 Liters of water every day. How many gallons of water 1(c) _____ does a tortoise drink in a week?



(d) Mater drives 65 miles/hour. How long will it take Mater in minutes to travel 1(d) _____ 250 km?



(e) A horse can carry 250 lbs of equipment. If you need to move 3.5 tons of equipment, how many horses will you need? 1(e) _____



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[20 pt] 2. Answer each of the following questions. ALL answers should contain the proper number of Significant Figures and the proper Units. Show work to receive full credit.

(a) A cook can bake 24 cookies in 10 minutes. How long in hours will it take 2(a) _____
him to bake 1.00×10^4 cookies?

(b) The nearest star is 3.99×10^{13} kilometers away, how long in days will it take a
space probe traveling 60 miles/hour to reach the nearest star? 2(b) _____

(c) A hose delivers 250 gallons of water a hour, how many mL are delivered in 6.0 days? 2(c) _____

(d) A farmer wants to trade some rabbits he has for goats. If he makes the 2(d) _____
following trades, how many rabbits will it take for him to get 7 goats? He
can trade 2 horses for 3 donkeys, another farmer will trade him 4 goats for
a donkey, while yet another friend will trade him 15 chickens for 10 rabbits.
One last friend agreed to trade him 1 horse for 30 chickens.

(e) A chemist wants to make 50.0 lbs of gold (Au). If he knows the following 2(e) _____
conversions, how many grams of lead (Pb) does he need to start with to
make 50.0 lbs of gold (Au)? 1 mol of Au weighs 197.0 grams, 1 mol of Pb
weighs 207.2 grams, for every 2 mols of Au he makes he needs 1 mol of Pb.
Note, you have not learned what a mol is, but can still use it as a conversion
factor.