



NOTIFICATIONS:

Please prepare for a quiz next session testing the vocabulary and determining whether an argument is factually correct, valid, and sound.

SchoolNova, in collaboration with the math dept, will be offering AMC 8 contest. It will be given in the evening of Nov 13, 2018. The contest will be free of charge, but seats are limited, so all students interested in taking the contest should register by filling this google form:

<https://goo.gl/forms/7OKidg3L1HqGnxft2>

More info about AMC 8 can be found here:

<https://www.maa.org/math-competitions/amc-8>

valid syllogistic argument forms

(f1) all X are Y all Y are Z / all X are Z	(f2) all X are Y some X are Z / some Y are Z	(f3) all X are Z no Y are Z / no X are Y	(f4) no X are Y some Y are Z / some Z are not X
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Attach lined paper showing your solutions neatly.

If your work is not organized, it will not be reviewed!

Can you determine who is a knight and who is a knave?

1. You meet two inhabitants: Peggy and Zippy. Peggy tells you that “of Zippy and I, exactly one is a knight”. Zippy tells you that only a knave would say that Peggy is a knave.
2. You meet two inhabitants: Zed and Alice. Zed tells you, “I am a knight or Alice is a knave.” Alice tells you, “Of Zed and I, exactly one is a knight.”
3. You meet two inhabitants: Ted and Zippy. Ted says, “Of I and Zippy, exactly one is a knight.” Zippy says that Ted is a knave.

4. For each of the following say whether the statement is true (T) or false (F).
- a) In any factually correct argument, the premises are all true.
 - b) In any factually correct argument, the conclusion is true.
 - c) Every sound argument is factually correct.
 - d) Every sound argument is valid.
- 5.
- a) no cats are dogs
some dogs are pets
/ some pets are not cats
 - b) Some decisions are careful reflections.
All decisions are uses of free will
/ Some careful reflections are uses of free will.
- (1) Is the argument factually correct?
 - (2) Is the argument valid?
 - (3) Is the argument sound?
- (1) Is the argument factually correct?
 - (2) Is the argument valid?
 - (3) Is the argument sound?

6. Alexandra decided to cook a series of low-calorie meals for her family this week. Using only the clues below, match each recipe to the night it was served, the number of calories it contained and the total amount of protein (in grams) in each serving.
1. The meal served on May 14th contains somewhat more calories than the recipe served on May 15th.
 2. The citrus halibut was either the meal served on May 15th or the meal served on May 14th.
 3. Of the recipe with 400 calories and the kale quinoa, one was served on May 12th and the other was served on May 17th.
 4. The asian steak contains 20 fewer calories than the recipe served on May 11th.
 5. The dish with 440 calories, the recipe served on May 15th and the dish served on May 14th were all different recipes.
 6. The garlic tilapia doesn't have exactly 440 calories.
 7. The meal with 380 calories was served on May 12th.

		recipes					nights				
		asian steak	citrus halibut	garlic tilapia	kale quinoa	lemon salmon	May 11th	May 12th	May 14th	May 15th	May 17th
calories	380										
	400										
	420										
	440										
	460										
nights	May 11th										
	May 12th										
	May 14th										
	May 15th										
	May 17th										