

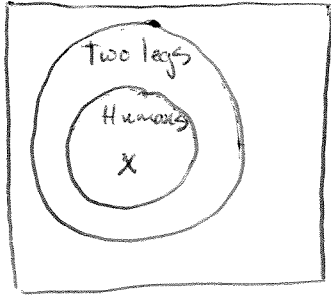
1 a. Inductive.

b. Deductive - First a statement about every film, then a statement about a particular film.

c. Deductive - First a statement about every fish, then a statement about a particular fish.

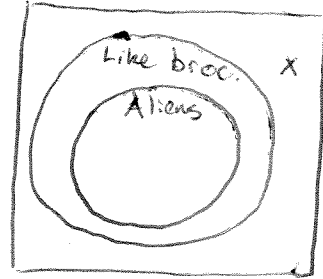
d. Inductive (though the premise is false - most fish lack the intelligence to appreciate Seven Samurai).

2. a.



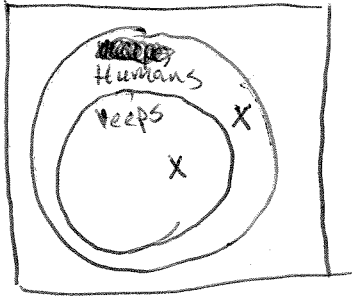
Valid
(and sound,
as far as
we know.)

b.



Valid, but
may not be
sound - don't
know enough
about aliens.

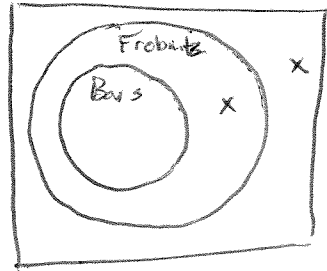
c.



Invalid

"All u.p.'s are human"

d.



Invalid.

"All Bors are Frobnitzes"

3. a. $1 \text{ mile} \cdot \frac{5280 \text{ ft}}{1 \text{ mile}} \cdot \frac{12 \text{ in}}{1 \text{ ft}} = \boxed{63,360 \text{ in}}$

b. $1 \text{ kilometer} \cdot \frac{1000 \text{ meters}}{1 \text{ kilometer}} \cdot \frac{100 \text{ centimeters}}{1 \text{ meter}} = \boxed{100,000 \text{ centimeters}}$

c. $10 \text{ kilometers} \cdot \frac{100,000 \text{ centimeters}}{1 \text{ kilometer}} \cdot \frac{1 \text{ in}}{2.54 \text{ cm}} \cdot \frac{1 \text{ mi}}{63360 \text{ in}} = \boxed{6.214 \text{ miles}}$

from (b) from book from (a)

d. $23 \text{ Turings} \cdot \frac{1 \text{ £}}{10 \text{ Turings}} \cdot \frac{\$1}{\text{£}0.87} = \boxed{\$4.035}$

e. $\frac{\text{€}750,000,000}{4000 \text{ meters}^2} = \text{€}187,500 \text{ per m}^2$

or in scientific notation:

$\frac{\text{€}7.5 \cdot 10^8}{4 \cdot 10^3 \text{ m}^2} = \frac{7.5 \cdot 10^5}{4} \frac{\text{€}}{\text{m}^2} = 1.875 \cdot 10^5 \frac{\text{€}}{\text{m}^2}$

This would be OK, too.

f. $4000 \text{ m}^2 \cdot \left(\frac{100 \text{ cm}}{1 \text{ m}}\right)^2 \cdot \left(\frac{1 \text{ in}}{2.54 \text{ cm}}\right)^2 \cdot \left(\frac{1 \text{ ft}}{12 \text{ in}}\right)^2 = \boxed{187500 \frac{\text{€}}{\text{m}^2}}$

$= \boxed{43055.6417 \text{ ft}^2}$