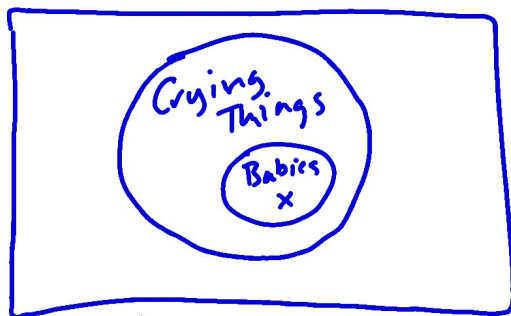


Practice Test Solutions

1) a)



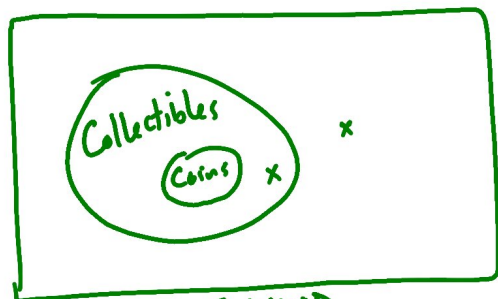
VALID

1. Some babies cry.

2. Ben W cries

\therefore Ben is a baby

b)



INVALID

1. No humans are poisonous.

2. Snakes are not human.

\therefore Snakes are poisonous.

2 a) He is a baseball player.

b) No animals have gives

c) Some H.S. students do not go to college

a) Noah will pass this class.

b) Some gasses smell bad.

c) All cars use gasoline.

3) p: He is a rock star.

q: He is a millionaire.

a) $p \wedge q$

b) $p \rightarrow q$

c) $\sim q \rightarrow \sim p$

AND = \wedge

OR = \vee

NOT = \sim

If...then... = \rightarrow

i) He isn't a millionaire if he isn't a rock star.

ii) He's a rock star if he isn't a millionaire.

iii) He's a rock star or isn't a millionaire.

4) p : I download music
 q : I download video games
 r : I own a computer

$$(p \wedge \sim q) \rightarrow \sim r$$
$$p \vee q \wedge \sim r$$

a) $p \wedge r \wedge \sim q$

I download music and own a computer and I do not download video games.

b) $(p \vee q) \rightarrow r$

If I download music or video games then I own a computer.

$$5) (p \vee q) \rightarrow (r \wedge \sim q)$$

$T \vee T = T$	$T \wedge T = T$	$T \rightarrow T = T$
$T \vee F = T$	$T \wedge F = F$	$T \rightarrow F = F$
$F \vee T = T$	$F \wedge T = F$	$F \rightarrow T = T$
$F \vee F = F$	$F \wedge F = F$	$F \rightarrow F = T$

p	q	r	$p \vee q$	$\sim q$	$r \wedge \sim q$	$(p \vee q) \rightarrow (r \wedge \sim q)$
T	T	T	T	F	F	F
T	T	F	T	F	F	F
T	F	T	T	T	T	T
T	F	F	T	T	F	F
F	T	T	T	F	F	F
F	T	F	T	F	F	F
F	F	T	F	T	T	T
F	F	F	F	T	F	T

Translate the following statement into symbols and create the truth table.

If I am not a criminal and I own a handgun then I am a police officer.

p: I am a criminal