

# CRITICAL THINKING FOR PURCHASING PROFESSIONALS



# Critical Thinking for Purchasing Professionals

Presented to

The National Procurement Institute

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▣ Jack is looking at Anne, but Anne is looking at George. Jack is married but George is not. Is a married person looking at an unmarried person?

✓ Yes

✓ No

✓ Cannot be determined

# What is critical thinking?

- ▣ Reflective reasoning
- ▣ The examination and test of propositions in order to find out whether they correspond to reality or not.
- ▣ It is a mental habit and power.
- ▣ It is our guarantee against delusion, deception, superstition, and misapprehension of ourselves and circumstances

# More definitions of critical thinking

- ▣ "reasonable reflective thinking focused on deciding what to believe or do"
- ▣ "the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, or evaluating information gathered from, or **generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action**"
- ▣ "includes a commitment to using reason in the formulation of **our beliefs**"

# Habits and traits of mind

- ▣ A desire to follow reason and evidence wherever they may lead,
- ▣ A systematic approach to problem solving,
- ▣ Inquisitiveness, even-handedness, and confidence in reasoning



# The Three Functions of the Mind

**Thinking:**  
Makes sense  
of the world

Judging

Perceiving

Analyzing

Clarifying

Determining

Comparing

synthesizing

**Feeling:** Tells  
us how we are  
doing

Happy

Sad

Depressed

Anxious

Stressed

Calm

Worried

excited

**Wanting:**  
Drives us to  
act as we do

Goals

Desires

Purposes

agendas

Values

motives

# Critical thinking is driven by intelligence and rationality

Linda is 31 years old, single, outspoken and very bright. In college, she majored in purchasing. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti nuclear demonstrations

Which is more probable?

(A) Linda is a buyer

(B) Linda is a buyer and is active in the feminist movement

# Critical thinking calls for the ability to

- ▣ Recognize generalizations
- ▣ Reconstruct one's patterns of recognizing problems
- ▣ Render accurate judgments about issues
- ▣ Understand the importance of specific things and qualities in prioritization
- ▣ Gather and marshal pertinent (relevant) information
- ▣ Recognize unstated assumptions and values
- ▣ Comprehend and use language with accuracy, clarity, and discernment
- ▣ Interpret data, to appraise evidence and evaluate arguments
- ▣ Recognize the existence (or non-existence) of logical relationships between propositions
- ▣ Draw warranted conclusions and generalizations

# Where does critical thinking apply in purchasing?

- ▣ Making purchasing decisions – Can I determine which information is most relevant in making effective decisions?
- ▣ Negotiation – Can I separate fact from puffery? Do I know and understand my interests in this negotiation?
- ▣ Dealing with others – Can I handle and evaluate criticism? Do I hear and understand what's being said?

# What stands in the way of critical thinking?

- ▣ Perception
- ▣ Emotion
- ▣ Intellect
- ▣ Language
- ▣ Beliefs
- ▣ Environment



# Perception

Do this in your head, do not write it down.

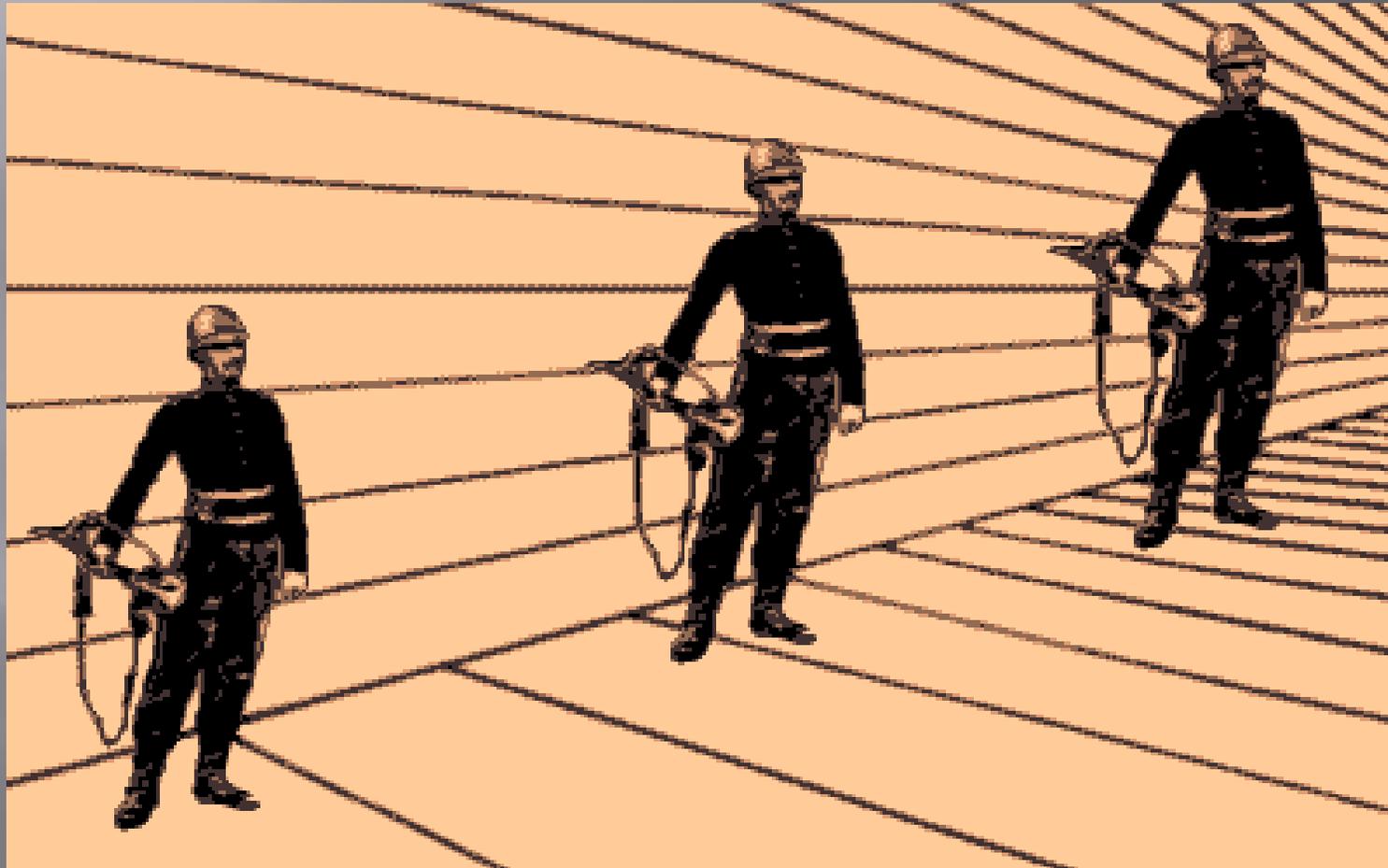
- ▣ Take 1000 and add 40
- ▣ Take another 1000 and add 30
- ▣ Take another 1000 and add 20
- ▣ Take another 1000 and add 10

What is the total?

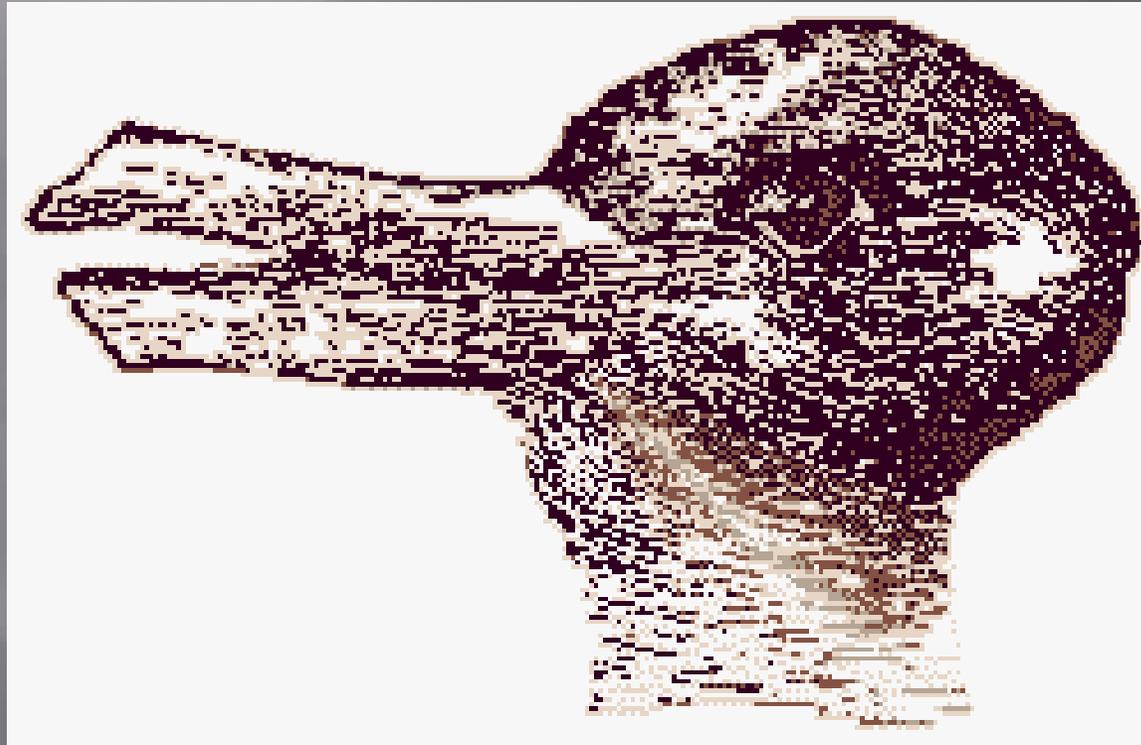
Say the color not the word

YELLOW	BLUE	ORANGE
BLACK	RED	GREEN
PURPLE	YELLOW	RED
ORANGE	GREEN	BLACK
BLUE	RED	PURPLE
GREEN	BLUE	ORANGE

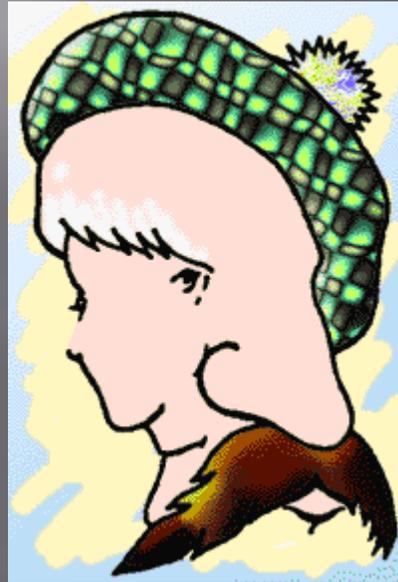
Who is taller?



Duck or rabbit?



Can you see 3 faces?



# Things some people believe

- ▣ 18% of people still believe the earth is the center of the universe.  
3% have no opinion
- ▣ 30% of Americans believe in ghosts
- ▣ 80% believe the government is keeping discoveries of aliens a secret
- ▣ 50% of millennials believe astrology is science
- ▣ 20% believe fortune tellers can see the future
- ▣ 60% believe dreams can foretell the future

# Which is true?

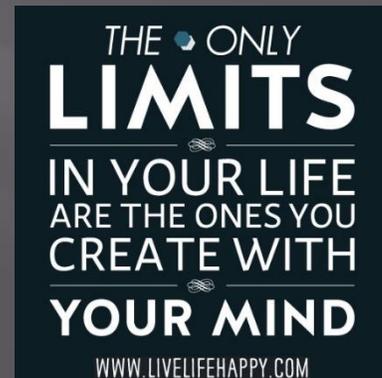
- ▣ If you go swimming within an hour after you eat, you will get a cramp.
- ▣ Drinking kills brain cells
- ▣ Sugar makes children hyper active
- ▣ When you shave your hair, it grows back darker and coarser
- ▣ Coca cola originally contained cocaine

# Fallacies of Belief

- ▣ It's true because I believe it.
- ▣ It's true because we believe it.
- ▣ It's true because I want to believe it.
- ▣ It's true because I have always believed it.
- ▣ It's true because it's in my selfish interests to believe it.

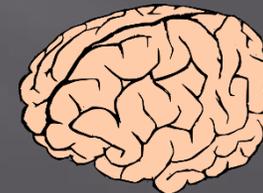
# How beliefs are impacted

- ▣ Availability
- ▣ Experience
- ▣ Conflict drift
- ▣ Selectivity
- ▣ Recency
- ▣ Sparkle
- ▣ Confirmation bias
- ▣ Confidentiality
- ▣ Anchoring
- ▣ Mental effort



# Critical thinking involves both right brain and left brain thinking

- ▣ Right brain thinking – uses feelings, sees “big picture.” uses imagination and belief, looks at possibilities, is risk taking
- ▣ Left brain thinking – logical, detail oriented, reality based, looks for order, patterns, strategy developing, practical, safe



# Can you solve these?

WCNIT (what comes next in this series?)

What word associates these?

- ▣ Mouse, blue, cottage
- ▣ Barrel, root, belly
- ▣ High, book, sour
- ▣ Ache, hunter, cabbage

# Critical thinking involves using intuition and logic

A pad and a pen cost \$1.10 together, if the pad cost a dollar more than the pen, how much does the pen cost?

# Critical thinking starts with understanding your purpose

- ▣ What's your mission for this project?
- ▣ What's your value proposition for this purchase?
- ▣ What does my organization expect from me?



# True loyalty to a purpose

- ▣ True loyalty to the public purchasing discipline is born out of recognition of purchasing's potential power for good in the world.
- ▣ It is not a commitment to all the practices of public purchasing as they stand.
- ▣ It is not given by the intensity with which one defends the practices.
- ▣ Ask yourself two questions:
  - Do I recognize the power of public purchasing's mission?
  - Do recognize and acknowledge shortcomings in its current state of development??

# Critical thinking and the problem solving process

- ▣ Defining the issue
- ▣ Analyzing the issue
- ▣ Generating solutions to the problems at issue
- ▣ Evaluating the solutions
- ▣ Implementing the solution

# Defining your problem solving purpose (defining the issue)

What are we really trying to accomplish?

First, I write my primary objective from my point of view as a course designer.

**Primary Objectives**

Photo by Jaci Berkepec

# Example of finding purpose

The parking lot outside your office is filled to the brim. Visitors can't find parking to do normal business. Contractors can't find parking and jobs are taking longer, resulting in extra fees for delays. Employees are regularly tardy because they drive around looking for parking and their customers are complaining about difficulties with timely responses to their issues.

- You need to solve this problem.
- What is the real issue here?

# Critical thinking and root cause analysis

You can see symptoms not problems

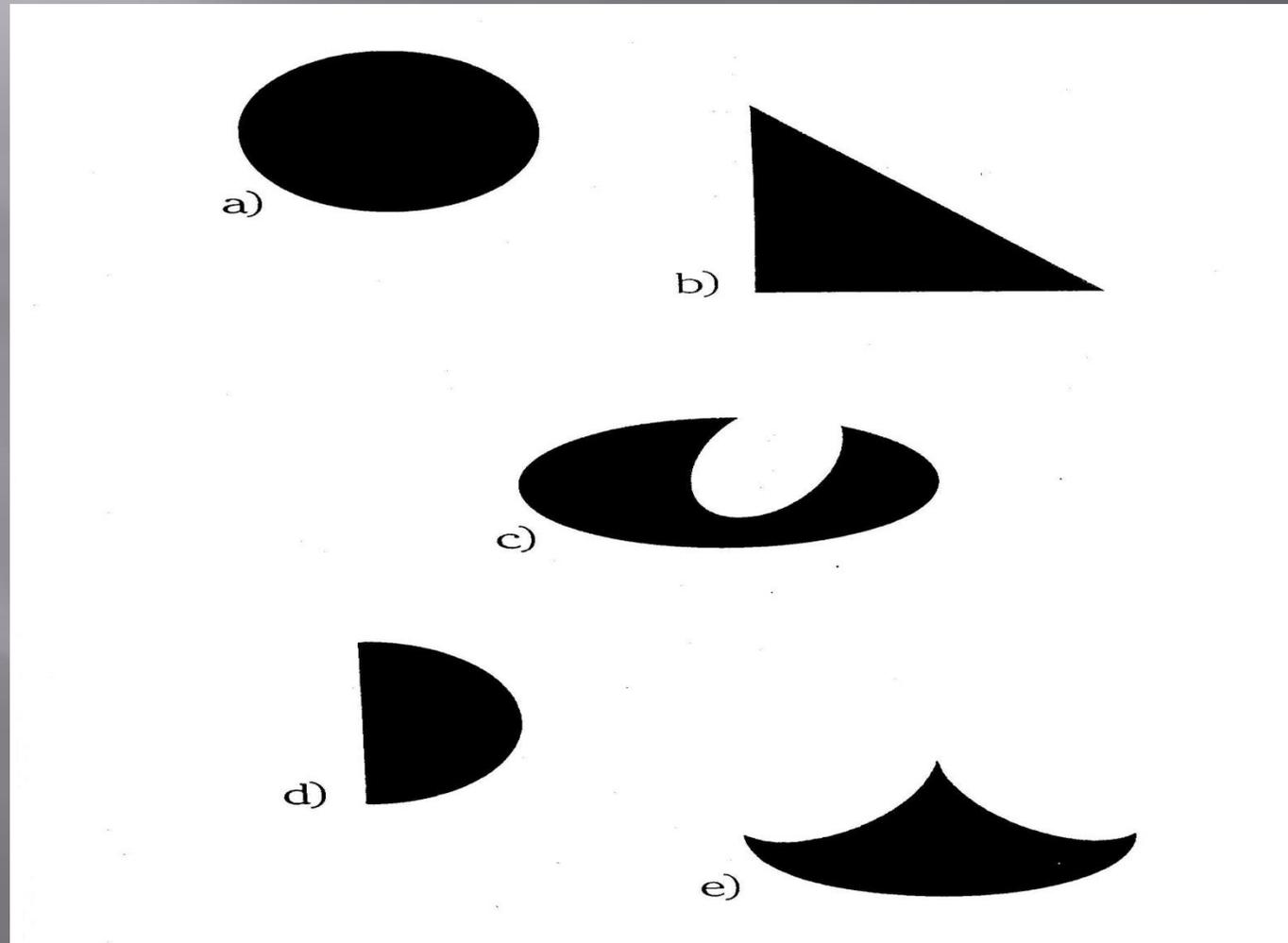
Questions to ask:

- what's different when this happens?
- what's the same when this happens?
- when does it happen?
- when doesn't it happen?
- what's my hypothesis?

# 5 Whys

- ▣ Our office is not very productive *Why?*
- ▣ Because the buyers don't get stuff done *why?*
- ▣ Because they are unmotivated *why?*
- ▣ Because management doesn't motivate them *why?*
- ▣ Because management doesn't know how *why?*

Five figures are shown below. Select the one that is different from all of the others.



# Assumption smashing

- ▣ Organizations can't survive without purchasing
- ▣ Happy employees are better employees
- ▣ Management needs to keep employees informed
- ▣ It's bad to beat employees to make them work



# Consulting is essential to critical thinking

- ▣ Creates buy-in
- ▣ Clarifies thinking
- ▣ Broadens thinking
- ▣ Provides expertise
- ▣ Tests thinking



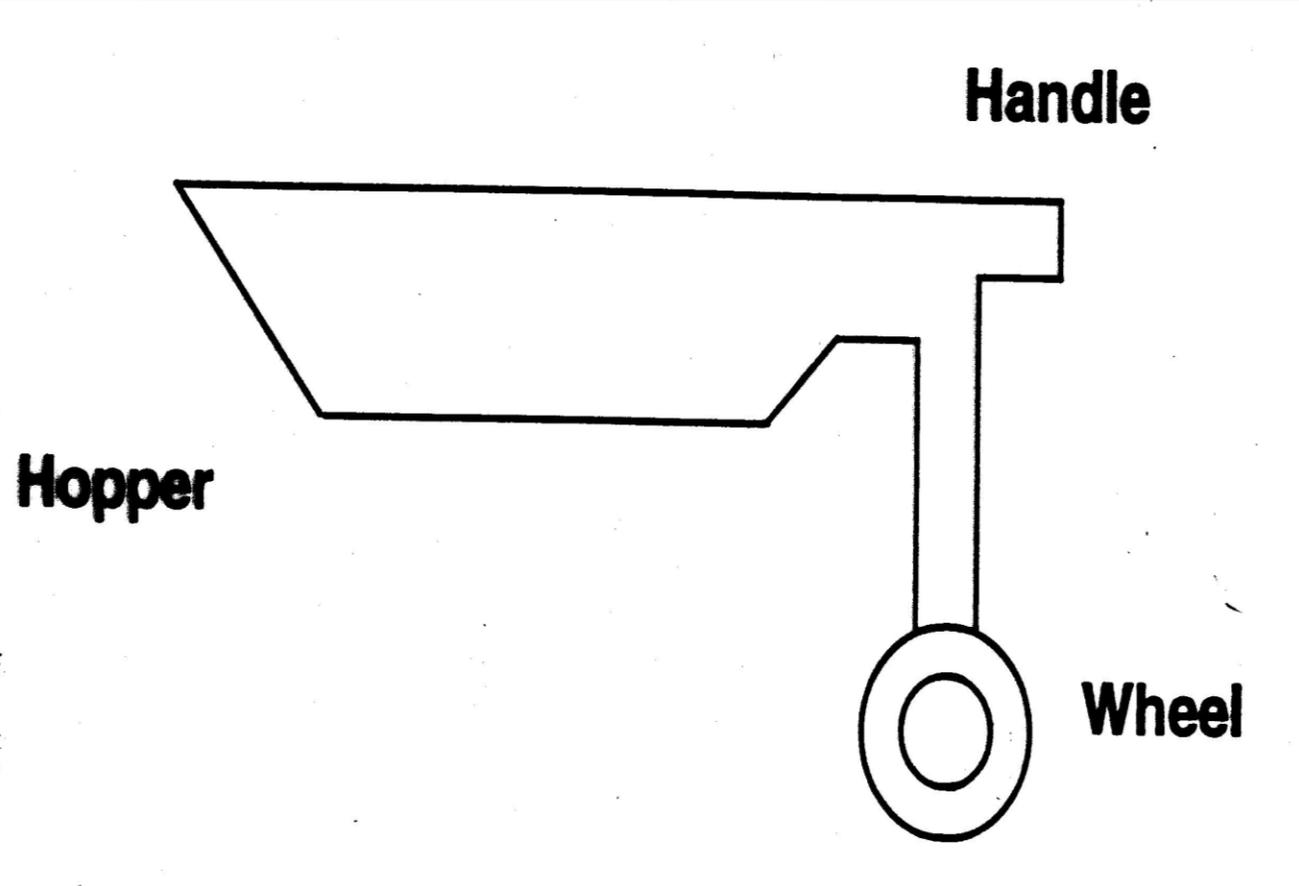
# Consulting and critical thinking

- ▣ 24H in a D
- ▣ 26Lof the A
- ▣ 7D of the W
- ▣ 12S of the Z
- ▣ 66B in the B
- ▣ 52C in a P (w/o J)
- ▣ 13s in US F
- ▣ 18H in a GC
- ▣ 39B of the OT
- ▣ 5T on a F
- ▣ 90D in a RA
- ▣ 3B M (SHTR)
- ▣ 32d is the T in F at which WF

# Evaluating possible solutions

The ideal solution:

- ▣ Provides the benefits
- ▣ Deals effectively with obstacles and constraints
- ▣ is acceptable to stakeholders
- ▣ Involves an acceptable level of risk



**Hopper**

**Handle**

**Wheel**

# The doubting game

Looking for reasons why it won't work:

“It's against policy”

“others have done it”

“others haven't done it”

“let's form a committee to look at it”

“Let's run it by legal” (ultimate idea killer)



# Believing game

- ▣ Looking for reasons why it will work
- ▣ Probing farther into it
- ▣ Asking how it could work
- ▣ Asking what else it could achieve
- ▣ “Warmth fosters growth, cold destroys it” Chinese proverb

# Risk assessment

- ▣ What are the risks?
- ▣ What is the likelihood of a risk event occurring?
- ▣ How severe would the effects be?
- ▣ Can a risk event be avoided or prevented?
- ▣ If event occurs, how can it be mitigated?

Your entity has developed a program to encourage employees to bicycle to work.

**How many risks can you identify with this program?**



# Listening is a key part of empathy and critical thinking

- ▣ Do I understand what's being said?
- ▣ Am I paying attention to facial expressions, body language, tone of voice?
- ▣ Can I separate fact from opinion?
- ▣ Am I demonstrating that I understand?













# Part of analysis is separating fact from opinion

Can you separate fact from opinion?



# Difference between fact and opinion

- ▣ Facts are statements that can be proven .
- ▣ Opinions can not be proven . They are based on someone's thoughts, their feelings and their understanding.
- ▣ Though you may be able to use facts to add credibility to an opinion, it is still an opinion

# Decide whether each statement is a fact , or an opinion .

- ▣ The best way to choose a spouse is based on brains, not beauty
- ▣ The car probably stopped running because it ran out of gas
- ▣ The Mac computer lab is in Blodgett Hall
- ▣ If I were to go on to receive my Bachelors, I would not be successful.
- ▣ There are 121 prescription drugs that come from plants.

# Can you separate fact from opinion in the following?

Working in the purchasing office is really stressful. Most requisitions take at least 30 days to process, but some can take even longer. The clients can be nasty sometimes, but we do our best to help them. Our new boss started working here in July. She is really smart and knows a lot about purchasing. She will be a big help in getting the office straightened out so that work will be less stressful.

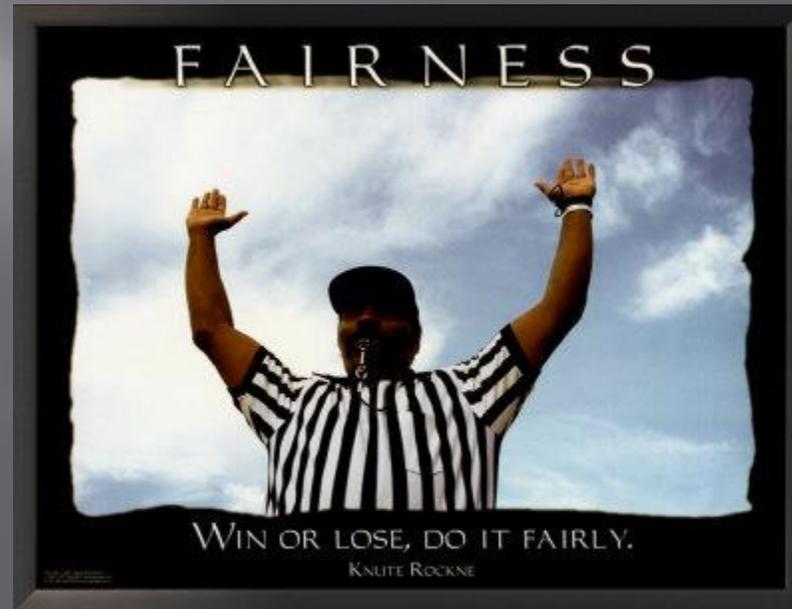
# Questions asked by critical thinkers

- ▣ Why?
- ▣ So what?
- ▣ What if?



# Critical thinking requires fair mindedness

- ▣ Intellectual empathy
- ▣ Intellectual integrity
- ▣ Intellectual perseverance
- ▣ Confidence in reason
- ▣ Intellectual autonomy



# Thought and behavior can be driven by emotion

- ▣ How will it look to others?
- ▣ I'll do it later
- ▣ How was the question framed?
- ▣ What was the context?
- ▣ Fear of loss v anticipation of gain
- ▣ Default decisions
- ▣ Coke v Pepsi



# Ego can get in the way of critical thinking

- ▣ Know who you are, your boundaries and limits.
- ▣ What is your role and impact on your team?
- ▣ Can you handle constructive criticism?
- ▣ Deal with your ego. Ask yourself what triggers your emotions.
- ▣ Ask yourself what is really happening when you feel fear or resentment at work. What is the cause?
- ▣ First words learned by toddlers is “it’s mine!” Can we reach beyond ego and make a decision that is good for the organization?

# Common thinking fallacies

# False dichotomy

- ▣ Only two choices – it's either A or B

We help refugees or we provide housing for homeless Vets

# Common sense fallacy

- ▣ Relying on experience alone doesn't offer enough information to draw reliable conclusions
- ▣ If most people think that something makes sense it must be true, has been disproven over and over again
- ▣ Einstein “*Common sense is nothing more than a deposit of prejudices laid down by the mind before you reach eighteen*” .

# Illusion of control

Lift your right foot a few inches from the floor and then begin to move it in a clockwise direction. While you are doing this, use your right index finger to draw a number 6 in the air.

# Overconfidence

Can you pass a 4<sup>th</sup> grade history test?

- ▣ Where is the Mason-Dixon Line?
- ▣ Who coined the phrase “laissez-faire” economics?
- ▣ Who ran for president three times and lost?
- ▣ Which amendment ended slavery?
- ▣ Does the first article of the constitution address –Human rights, natural rights, or the role of government?

# Other thinking fallacies

- ▣ We've come this far, sunk cost
- ▣ That proves my point
- ▣ Dysfunctional competition
- ▣ He's a moron



# Don't spend a lot of time on inconsequential decisions

Are these crucial decisions?

- ▣ The layout of business cards
- ▣ Where to have lunch
- ▣ A 1% increase in a price for contract goods
- ▣ Whether to require a mandatory pre-bid

# Critical thinking in sum

- ▣ Any formal attack on ignorance is bound to fail because the masses are always ready to defend their most precious possession – their ignorance.” ~ Hendrik Van Loon
- ▣ In sum: "A persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends

# Critical thinking pitfalls

- ▣ Accepting only information that confirms our beliefs
- ▣ Somebody else thought it was a good idea
- ▣ People are enthusiastic about it
- ▣ The experts say it will work
- ▣ Acting too quickly or too slowly
- ▣ Buying into the ladder of inference

