Scoring Criteria Instructions

Average cognitive abilities for 3 years old

Verbal

Parents are able to understand child's speech.
Criteria: (words like Daddy, Mommy, doll, ball, etc.)

Names of things or people are spoken and understood.
Criteria: (words like ball, dolly, bowl, potty, etc.)

Can name body parts: Get a doll or point to child's own body and have them point out: eyes, nose, hair, legs, etc.
Criteria: Correctly identifying four parts.

Non-verbal

Create a tower of 8 cubes

Able to point to pictures:
      Can you point to the dog, tree, school, etc?

Can imitate a vertical line.
      Draw a line next to this one:

Average cognitive abilities for 4 years old
Verbal

Can define up to 10 words (can be how it's used or even just its shape)
Criteria: Allow the child to use his or her own vocabulary, even if it is not a standard word, such as "Ba" for "ball" or "Bubba" for brother's name. The criterion is whether the child can identify the object by the use of its verbal word.

Example: ball –   "A toy," "I play 'bounce' with it," "It is this big and red," etc.
   house – "I play with my dollies in my house," "I live in my house," "My house is where I sleep," etc.
   apple – "I eat it," " It is red," "It is food," etc.

Words extend to verbs and adjectives:
VERBS Which one flies?   Which one barks?

ADJECTIVES What do you do when you are cold, hungry, tired?
Criteria: naming some action for each, such as:
  cold – get a coat, cover up, get a blanket, etc.
  hungry – eat, ask mommy for a snack, get a cookie, etc.
  tired – take a nap, rest, sleep, etc.

Able to actually name pictures:
  What is this?

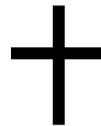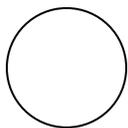Criteria: books   sun   snowman

Non-verbal
Name four colors: Show me the blue block, red block, yellow block, and green block.

Draw a person (with at least three or more body parts).

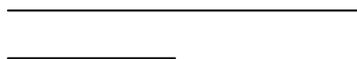## **Average cognitive abilities for 4 years old (continued)**

Draw these shapes.

Criteria: Approximate shapes

Put 1-3 blocks on the table.

Show me 1-3 fingers.

Can you tell me which one is longer?   _____

            _____

Average cognitive abilities for 5 years old
Verbal

VOCABULARY/LANGUAGE CONCEPTS
Identifies beginning consonant/vowel sounds
Criteria: Is this a vowel sound and what is it? A-a-a-a-a, E-e-e-e, I-I-I-I, O-o-o-o, U-u-u-u
          What letter makes this sound? Pa-a-a-a, Ka-a-a, Ba-a-a, Da-a-a, Ta-a-a
Recite alphabet
Criteria: At least 20 letters (ABCDEFGHIJKLMNOPQRSTUVWXYZ) can be sung or
recited

Verbal applications
Write (print) own name and address.
Write name of best friend, parents, siblings, pets.
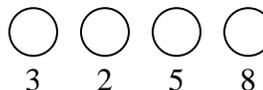
Non-verbal
Math
Count to 10.
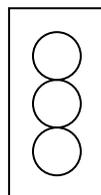Write numbers 1-10.
Write own telephone number.
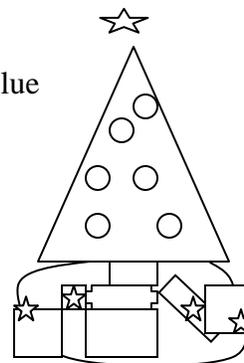Draw the correct number of dots on each ladybug.

PUZZLE/SPATIAL
25 piece puzzle
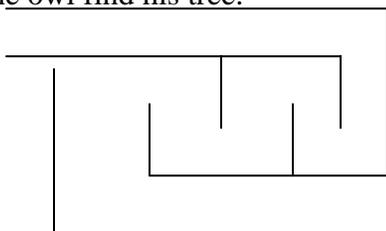Color the following traffic light:

Color the stars yellow, the triangles green, the rectangles red, the circles blue
      and the squares orange.

Draw the shape that comes next:

* Help the owl find his tree.

Average cognitive abilities for 6 years old
Verbal

VOCABULARY
Criteria: Uses either a synonym (another word of similar meaning) or function (how it is used or described.)

Apple - Fruit; I eat it; It is red and juicy, etc.
Ball - A toy; I bounce it; I play basketball; It is red and looks like this (draws it), etc.
Book - A story; It has pages and you read it; It has words and pictures, etc.
Doll - It is figure of a person, animal, baby; It is my baby; It is soft and looks like a baby, etc.
Horse - An animal; cowboys ride them; They have four legs and gallop, etc.
Truck - Like a car, only bigger; You can carry big or a lot of things; an eighteen-wheeler, etc.

LANGUAGE CONCEPTS

Sound out letters to begin reading words.   M-O-M, P-I-G,   F-O-X
Write the missing letter for each picture.

__F__ish   han_d__   S _t _a_ r__   M _o_u s_e_ __ __

Write a word that rhymes with each of the above pictures.
Say nursery rhyme and then answer:
What happens in each? Can what happens really happen? Is there a lesson?
Criteria: Able to verbally give accounts of theme of story

Non-verbal
MATH Operations

Count from 1-100

1	2	(3)	4	5	6	(7)	(8)	9	10
11	(12)	13	14	(15)	16	17	(18)	19	(20)
21	22	23	(24)	25	(26)	27	28	(29)	30

Write the addition number sentence:
    ♡ ♡ ♡

___(3)___ + ___(2)____ = _(5)_____

2 + 1 = ___(3)__, 6 + 2 = __(8)_____, 5 + 4 = _(9)_____

Average cognitive abilities for 6 years old (continued)
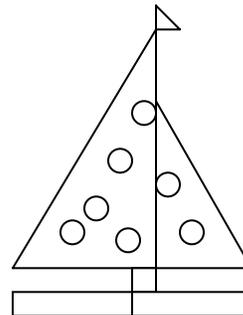
PUZZLE/SPATIAL

What comes next:

red, white, white, red, white, ___(red)____
ABCDABC_(D)_

Find the different shapes in the picture then name them

(Triangles, rectangles, circles, square)

Fill in the correct times:

___8:00_____   ____11:00_____   ___6:15_____

Average cognitive abilities for 7 years old

VOCABULARY
Criteria: Uses either a synonym (another word of similar meaning) or function (how it is used or described.) Examples:
Blue   - color, color of the clear sky, feeling depressed, a music style, livid (of the skin)
Book   - printed work, a story, record, main division of a larger volume, you read it
Five   - one more than four, holds up five fingers, writes the symbol, counts five objects
Friend - a person for whom one is fond, ally, supporter, sympathizer, a buddy
Mother - named person, one who gives birth, origin or source, female head of family
Play   - to move rapidly, lightly, to have fun, to participate in a game, to gamble, to perform a musical instrument, to cause or to move, a performance
This   - designation of an object or concept, a location, a measurement, person
Road   - highway, course, a place near a shore for anchor, something you drive on

LANGUAGE CONCEPTS

Put these words in order to make a complete sentence.
    fast can You run
    dog took The nap a

Criteria: You can run fast
            The dog took a nap.

Use the following phrases to make a complete sentence:
    I like ….
    Can play …

Non-verbal
MATH COMPUTATIONS
Criteria:

$11 + 6 = (17)$	$8 - 5 = (3)$
$21 + 3 = (24)$	$16 - 2 = (14)$
$8 + 8 = (16)$	$13 - 6 = (7)$
$4 + \_(3)\_ = 7$	$8 - (7)\_\_ = 1$
$(5) + 9 = 14$	$(18)\_ - 5 = 13$

MATH SPATIAL

* Can you find the words:
boxes, lunch, city, car, snow, run

m	D	C	A	R	l	p
b	O	x	E	S	u	g
h	A	f	D	n	n	n
c	I	t	Y	o	c	i
r	N	l	B	w	h	s

Place in order: ___(3)__Bite into pizza
                 ___(1)__ Pick up piece
                 ___(2)__ Cut pizza into pieces

Average cognitive abilities for 8 years old
Verbal

VOCABULARY

Criteria: Uses either a synonym (another word of similar meaning) or function (how it is used or described)

Children - young boys or girls, more than one child, sons or daughters, group of individual's under the care of another older person

Men - more than one man, adult males, male citizens, the human race, husband, father

Monday - second day of the week, the day after Sunday or before Tuesday, named for the moon,

Quiet - still, calm, motionless, not noisy, hushed, not speaking, silent

School - place for teaching and learning, all of its students and teachers, a regular session of teaching, process of being educated, gaining knowledge

Second - one/60th of a minute, the one after the first in rank, an article of less quality, an aid or assistant, a gear, to indicate formal support of a motion in voting

Spring - season, to leap, to appear, to bounce, to arrive from some source, grow or develop

Breakfast - first meal of the day, a meal, when you usually eat cereals, morning meal

LANGUAGE CONCEPTS

Give a word that means the same/ opposite using the words below. (Note: There are other appropriate answers; however, the following can serve as examples.)

Small _____/_____	Little / large
Close _____/_____	Near / Far
Scream _____/_____	shout / noiseless

Non-verbal

MATH COMPUTATIONS

Count from 1 to 100 by 2's, 5's, and 10's.

$573 + 212 = 785$	$77-52 = 25$	$4982 + 1358 = 6340$
$39-14 = 25$	$5 + 8 + 3 + 2 = 18$	$5 \times 1 = 5$
$2 \times 4 = 8$	$6 \div 2 = 3$	$9 \div 3 = 3$

MATH SPATIAL

What comes before/after?

_____ 503 _____   (502 / 504)

_____ 23 _____   (22/24)

Thomas counted 8 oranges, 7 pears, and 4 apples in a fruit bowl. What was the total number of fruit?   (19)

Mary put 7 pennies, 3 nickels and 4 dimes in her bank. How much money did she put in? (62 cents)

Measure the line in inches   _____ (2 inches)

If Jack had 4 dimes and a nickel, how much money would he have left if he bought a candy bar for 25 cents? (20 cents)

Average cognitive abilities for 9 years old
Verbal

VOCABULARY

Criteria: Uses either a synonym (another word of similar meaning) or function (how it is used or described.)

Assure - To give assurance, convince, to give confidence, to promise confidently, to insure, to guarantee

Advice – Opinion, counsel, information, report, guidance, direction

Refrigerator – a place, an appliance, a box where you store food, where you freeze things

Different - not alike, dissimilar, not the same, distinct, various, unusual

Ecosystem - community of environmental related beings, a system of how plants and animals live from one another's habits, the interdependence of life

Familiar - Friendly, close, intimate, too friendly, unduly intimate, closely acquainted with, ordinary

Prefer- To promote, advance, to put before a court, for consideration, to like better

Receive- To take or to take anything, to react to, to learn, to let in, to be a recipient, to greet

Remember- To think of again, to bring back to mind by effort, recall, memory, to mention to send regards, to bear in mind or call back to mind

Timid - Easily frightened, shy, lacking self-confidence, avoiding social confrontation

Thought - act of thinking, process of thinking, power of reasoning, idea, opinion or plan, attention, consideration, image

Tomorrow - The day after today, a future day, the period in 24 hours

Non-verbal

MATH COMPUTATIONS

Which number is greater? 3491, 3611, 3589, 3601 (3611)

We left the house at 9:00 and got to the park at 11:25. How long were we in the car? (2 hours and 25 minutes)

On Tuesday, Kay bought 6 pairs of pants for $14.95. She gave the clerk $20.00, how much change did she get back? ($5.05)

Circle the even numbers and underline the odd numbers.

26, 42, <u>85</u>, 64, <u>73</u>, 630

$4.65 + $6.10 = ($10.75)   86 – 9 = (77) $ 8.69 - $4.32 = ($4.37)

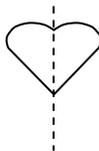14 x 5 = (70)   (3 x 2) x 4 = (24)   12 ÷ 4 = (3)

MATH SPATIAL

Which number is next ? 50, 44, 38, 32, _(26)____.

I can see 20 people on the street. 7 have open umbrellas and 11 have closed umbrellas. How many don't have an umbrella at all? (2)

Draw a line of symmetry for

each figure.

Average cognitive abilities for 10 years old
Verbal

VOCABULARY
Criteria: Uses either a synonym (another word of similar meaning) or function (how it is used or described.)
Assemble – to fit or join together, to gather into a group, collect
Resemble – look like, to be like or similar to, to be used in a metaphor or simile
Urgently – critical, calling for haste, immediate action, insistent
Disappeared – not visible any longer, to cease to be seen, go out of sight, to cease being
Instructor – teacher, to supervise, a college rank
Heritage – ancestral gifts or genetics, background, property inherited, tradition
Endanger – put in dangerous circumstance, to expose to harm or loss
Artificial – not genuine, unreal, superficial, false, fake, not natural, insincere
Suspicious – distrustful, paranoid, wary, doubtful, dubious, apprehensive
Colossal – large, huge, massive, oversize, gigantic
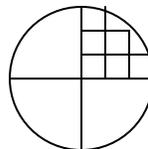
LANGUAGE CONCEPTS
Put vocabulary words in alphabetical order. *Artificial, Assemble, Colossal, Disappeared, Endanger, Heritage, Instructor, Resemble, Suspicious, Urgently*

Non-verbal

MATH COMPUTATIONS

What fraction does the shading represent?
½   1/3   ¼   1/5   (¼)

Which measurement would you use to estimate an elephant's weight?
    ounces, grams, milligrams, or pounds   (pounds)

Which shape includes parallel lines?

List numbers from least to greatest: 4892, 1927, 857, 395   (395,857,1927,4892)
734 - 157 = _577__   91 - 44 = ___47__   35 x 28 = 980___
84 ÷ 3 = 28___   559 ÷ 4 = _139.75____   2/8 + 3/8 = _5/8___
    _36__ inches = 1 yard
    _3___ feet = 1 yard
    __12__ inches = 1 foot

Average cognitive abilities for 10 years old (continued)

<u>MATH SPATIAL</u>
Joey has 8 books. Roberto has twice as many books as Joey has. How many books
    does Roberto have?
(16)

What is the next three numbers?   5, 10, 20, 40, _80_, 160_, 320__
                                        ninth, tenth, eleventh, (twelfth, thirteenth, fourteenth)

My number is between 0 and 15. It cannot be divided by 2 or 3. It is less than 13 but
more than 7. What is my number?   (11)

Average cognitive abilities for 11 years old
Verbal

VOCABULARY
Automobile – car, vehicle, something with wheels that carries people
Dinosaur – a prehistoric animal, an animal on the TV that lived a long time ago
Soccer – a game that is played with a ball, a game that you kick a ball
Ferocious – fierce, intense, wild
Anxiety – nervousness, worry, fear
Mosquito – an insect, a big that stings you, like a fly but it hurts and carries disease
Opinion – view, belief, outlook, observation
Daughter – a girl child, a mother's female baby
Thought – idea, thinking, reflection
Brag – boast, show off, talk big

LANGUAGE CONCEPTS
Put vocabulary words in alphabetical order. *(Abstain, Allocated, Compile, Confidential, Declaration, Dedicated, Illegal, Illiterate, Persistent, Prohibit)*
Fact or Opinion: Purple is the prettiest color. Why? *Opinion – it is a personal perception and preference.*
Write a paragraph using this sentence: I deserve more (allowance/food/space/freedom).
Criteria: *thematic consistency, complete sentence, logical*

Non-verbal
MATH COMPUTATIONS
What percent is equivalent to the fraction ¼ ? (25%)
Write in order of least to greatest: .9, .4, 1.6, 1.1, .7 (.4,.7,.9,1.1, 1.7)
How many millimeters are equivalent to 20 centimeters? (200)
$4762 \times 7807 = 37{,}176{,}934$ $467 + 37 = 504\_\_$ $\$157.50 \div 25 = \$6.30\_\_$
$1/2 + 3/4 = 5/4$ $(1^{1/4})$ $1/6 \times 3/5 = 3/30$ (1/10)

MATH SPATIAL
If Tom has 3 shirts, 4 pants, and 3 ties. How many possible different outfits
   does he have? (36)
What is the next two numbers in this pattern? 4, 9, 6, 11, 8, (13_, _10___).
Katie bought 7 bananas priced at $.50 each. She also has a coupon for $1.00 off the total cost. How much does Katie need to buy the bananas? ($2.50)
Which type of graph would be the best way to show the typical temperature during the year? Draw a probable results. CRITERIA: *a pictorial view of probable temperatures*)

Example: Temp.
Line

J F M A M J J A S O N D
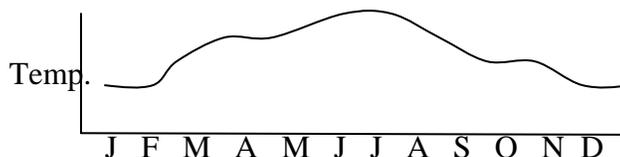
Average cognitive abilities for 12 years old
Verbal
VOCABULARY
Persistent – unrelenting, constant, lasting, determined
Compile – amass, list, accumulate, bring together, assemble
Declaration – a statement, announcement, assertion, speech, tax item
Dedicated – devoted, committed, keen, fanatical, enthusiastic
Illegal – against the law, unlawful, prohibited, banned, illicit, dishonest
Confidential - secret, intimate, private, classified, restricted
Illiterate – uneducated, can't read, uninformed, ignorant, untaught
Allocated – designated, owed, billed, due
Prohibit – forbid, ban, exclude, make illegal
Abstain – refrain, desist, withdraw, withhold, give up

LANGUAGE CONCEPT
Write the correct abbreviations: United States of America, feet, February, ounce (U.S.A., ft., Feb., oz.)

Non-verbal

MATH COMPUTATIONS
Which of the following are prime numbers? 6   <u>7</u>   <u>11</u>   15   51   <u>53</u>
Find the prime factorization of 48. 2 x 2 x 2 x 2 x 3
2 ¾ + 5 1/3 = $8^1/_{12}$ 6 4/5 – 3 2/3 = $3^2/_{15}$
1 1/5 x 3 ½ = $4^1/_5$ ¾ ÷ 4/5 = $^{15}/_{16}$

MATH SPATIAL
Write the formula used to find the perimeter of a rectangle. (P = 2l + 2w)
List the following from greatest to least: 7.8, 7.56, 7.1, 7.85 (7.85, 7.8, 7.56, 7.1)
Mary needs ½ yard to make a shirt and ¾ yard to make matching pants. How
    much fabric does Mary need altogether? (1 ¼)
If Taryn can wash 2 cars every 45 minutes, how long will it take her
    to wash 5 cars? (1 hr., 52 minutes, 30 seconds)
Cindy and 2 friends ordered a large pizza for $9.00, 3 large drinks for $0.99 each,
    and a salad for $1.50. If they split these costs evenly, write an equation that will
    help you find the total cost.

   <u>(P=1) (9.00) + (D = 3)(.99) + (S = 1)(1.50)</u>   =   Average cost
              (F = 2)

Average cognitive abilities for 13 years old
Verbal

VOCABULARY
Adorned – decorated, festooned, ornamented, decked, bejeweled
Abundant – plentiful, copious, rich, profuse
Encounter- meet, bump into, confront, come together, gather
Factual – truthful, accurate, realistic, honest, based on fact, objective
Haughty – proud, arrogant, conceited, snooty, self-important
Impartial – neutral, fair, unbiased, independent, objective, detached
Migration – relocation, immigration, passage, exodus, journey
Rehabilitation - treatment, therapy, healing, rebuilding, reconstruction
Significant – important, major, noteworthy, momentous
Versatile – adaptable, flexible, resourceful, multitalented

LANGUAGE CONCEPTS
Which is spelled correctly? receeding   <u>receding</u>   reseding
                                       suceeding   sucseding   <u>succeeding</u>
                                       <u>intercede</u>   intracede   intersede

Non-verbal

MATH CONCEPTS

1.456 + 45.2 = 46.656   2.126 - .833 = 1.293   1.333 + 1333 = 1334.333
15 x .15 = 2.25   121.2 x .01 = 1.212   121 / .11 = 1100

Write 1/3 as a decimal and a percent. $0.333\ldots$ or 33%

An angle that is exactly 90° is called a __right____angle.

MATH SPATIAL

 What was John's total distance traveled when he ran 2 ¾ mile, swam 1.8 miles and
     biked 5 ½ mile?   (10.05)
Solve for x for the following equations:
        $x + 5 = 13$ and $5x = 25$ (x = 8, x = 5)
* What is the average temperature: -10, 30, 15, -11 ?   (8)
* What is the volume of this rectangular prism? 3
                                                      2   (36)
                                     6

*If today is Sunday, what is the second day after tomorrow?
     (Wednesday)

Average cognitive abilities for 14 years old
Verbal

VOCABULARY
Agitate – disturb, stir, trouble, campaign, excite, disquiet, rouse
Ambiance – atmosphere, feel, setting, mood, vibes, air
Deteriorate - get worse, decline, depreciate, weaken
Declassify – take out of category, take out of class,, out of order, change classification
Disengage - undo, uncouple, unfasten, untie, free
Eclectic – assorted, diverse, free, miscellaneous
Garrulous – talkative, chatty, voluble, outgoing
Insidious - sinister, dangerous, subtle, menacing
Intransigent – inflexible, stubborn, narrow-minded, obstinate, intractable
Remonstrate – argue, protest, oppose, squabble, bicker

LANGUAGE CONCEPTS

Read the following paragraph and explain an underlying basis for the conclusion.
   Most people think of skiing and winter sights when they think of Santa Fe, New
   Mexico.
   But summer can be just as enjoyable a time to visit.
(Criteria: logic and reasons given)
Pick a vacation or event your family has attended and write a page about that experience.
Judge for organization and sentence completeness.

Non-verbal
MATH COMPUTATIONS
Simplify $(3 + 5)^2$ x 2 – 6   (122)
Solve for x: 2x + 5 = 12   (3 ½)
Find X.   (X =1)

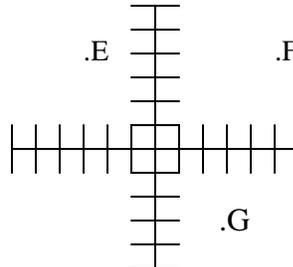3 [triangle] 21   x [triangle] 7
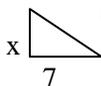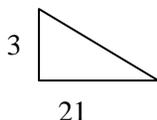
Plot the following coordinates:
   A(1,2) B(3,4) C(-2,1) D(0,0)
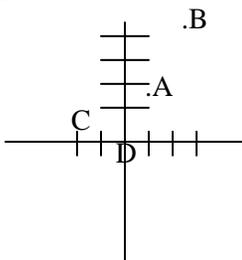
Give the coordinates for the points above:
   E(-3,4), F(5, 4), G(3, -3)

Average cognitive abilities for 14 years old (continued)

MATH SPATIAL
What is next in each pattern?
    x, x – 1, x – 2, _x-3_____
    2, 3, 5, 9, _17_____

If you have 3 blue, 4 white, and 5 red marbles in a bag and you pull one out of the
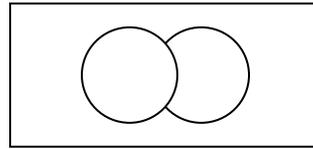   bag, what is the probability it would be white? (4 out of 12 or 0.333…)

$U = 30$
    10 = students who like Math only
    10 = students who like English only
    What number of students like Math and English?
     3 = liked neither subject?
(7)

Average cognitive abilities for 15 years old
Verbal

VOCABULARY
Anecdote – story, tale, personal response
Compliant – acquiescent, conforming, obedient, submissive, yielding
Deft – skillful, adroit, clever, smart, neat, nimble
Estrange – alienate, disaffect, distance, push away, isolate
Incumbent – in office, current, present, sitting, "Incumbent to proceed"
Infringe – break, disobey, breach, violate
Replenish – refill, stock up, reload, supply again
Replicate – duplicate, repeat, copy, imitate
Secluded – private, quiet, isolated, sheltered
Synthesis – mixture, combine, fusion, production

LANGUAGE CONCEPTS
Choose which would be the correct pairs of analogies:
Soothing: Aggressive   Architect: Construction
Desire: Wish   Sickness: Health
Contestant: Competition

Write a review of a poem (one page). *Criteria: consistent mood and content of expression of poem.*

Non-verbal
MATH COMPUTATIONS

Solve the equation $4x + 5(x + 1) = 2x + 12$ (x=1)

(0,2)
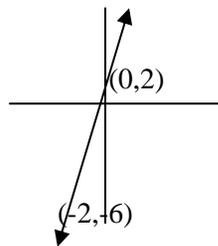
Solve the system (any method): $x + y = 1$
$4x + 8y = 8$
(x = 0, y = 1)
(-2,6)

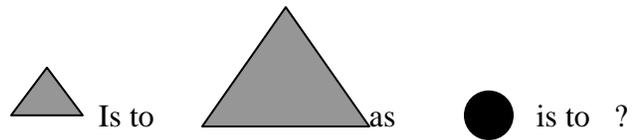Simplify: $\dfrac{4a^5}{2a^3} \bullet \dfrac{(3a)^2}{a}$ $(6a^3)$

MATH SPATIAL
What is next in each pattern?
2/3, 2, 6, 18, *54_*
-3, -2, -1, 0, 1__, _2__

Average cognitive abilities for 15 years old (continued)

Sue is Taryn's father's brother's sister. How is Sue related to Taryn?

(aunt)

Is to   as   is to   ?

Options:

What is the least number of trips it will take James to unload 22 boxes carrying 3 boxes at a time? (8)

Average cognitive abilities for 16 years old
Verbal

VOCABULARY
Arduous – difficult, hard, tough, grueling, demanding
Callous – heartless, unfeeling, insensitive, think-skinned, hard
Contention – argument, disagreement, conflict, controversy
Disparate – dissimilar, unequal, different, unrelated
Dissonance – discord, disagreement, difference, dissension
Elated – ecstatic, overjoyed, delighted, euphoric
Inclement – stormy, bad weather, foul, rainy
Misconstrue – misinterpret, misunderstand, misread, miscomprehend
Procrastinate – put off, delay, dawdle, postpone
Regaled – entertained, amused, delighted

LANGUAGE CONCEPTS
What does this proverb mean? Don't put all your eggs in one basket.
Criteria concept: *Don't place total faith in one expected outcome, diversify investments.*
What does this proverb mean? You can't make an omelet without breaking eggs.
Criteria: *You have to make waves to change something.*
What word would be the opposite to these words: Tardy, Frantic, Fragile
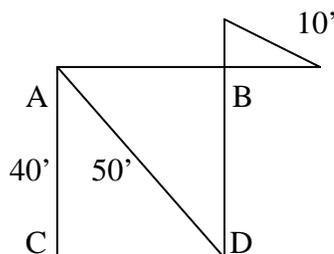What would be some synonyms to: Cajole, Dense, Powerful
Books to read: *Animal Farm* and *Julius Caesar*
Write a persuasive speech to your class stating why you should be the president of your class.
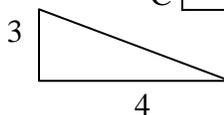
MATH COMPUTATIONS
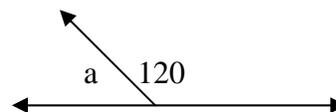What is the area of the rectangle?

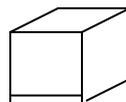   (1200')

Solve for the missing sides?   3
(5)
             4

The sum of the supplementary angles is __180_____°.
  Find the degree of ∠a. (60)
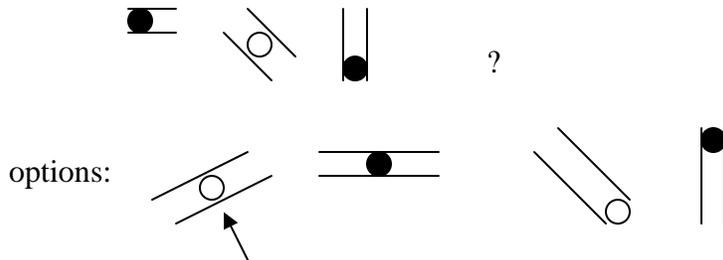
A   B   10'
40' 50'
C   D
a 120

MATH SPATIAL
What does this 3-dimensional cube look like?

Three friends went to dinner and the bill totaled $75.00. They added a 20 percent tip and equally split the check three ways. How much did each person pay? ($30)

Average cognitive abilities for 16 years old (continued)

Complete the series:

options:

Erica is twice as old as Lorri, but in ten years, Lorri will be as old as Erica. Five years ago, Erica was three times older than Lorri. What are their ages now?
(Erica = 20 years old, Lorri = 10 years old)

Advance items

VOCABULARY (one credit per correct answer)
Abstruse – obscure, perplexing, puzzling, mysterious
Adulate – flatter, put on a pedestal, adore
Antedate –to come before the present period, a date previous, history
Calumny - slander, defamation, lie
Insipid – dull, bland, wishy-washy, characterless
Lassitude –weariness, lethargy, laziness, sluggishness
Perfidy - treachery, disloyalty, deceit, betrayal
Purport - claim, imply, significance, purpose
Recondite – obscure, complex, esoteric
Sedulous – diligent, working hard and steady, consistently focused

LANGUAGE CONCEPTS (2 credits each)

What is the similarity of love and hate?
Criteria: emotions, relationship dynamics between people, forces of attraction.
What is the difference between honesty and opinion?
Criteria: Honesty is personal expression of truth, integrity, while opinion is an expression of a viewpoint, perhaps unrelated to self.

Average cognitive abilities for 16 years old (continued)
Advance items (continued)

MATH COMPUTATIONS (2 credits each)

1. What are the measures of the angles of the garden?

"L" street

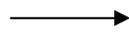"M" street

130 degrees   Lemmon St.

19th street
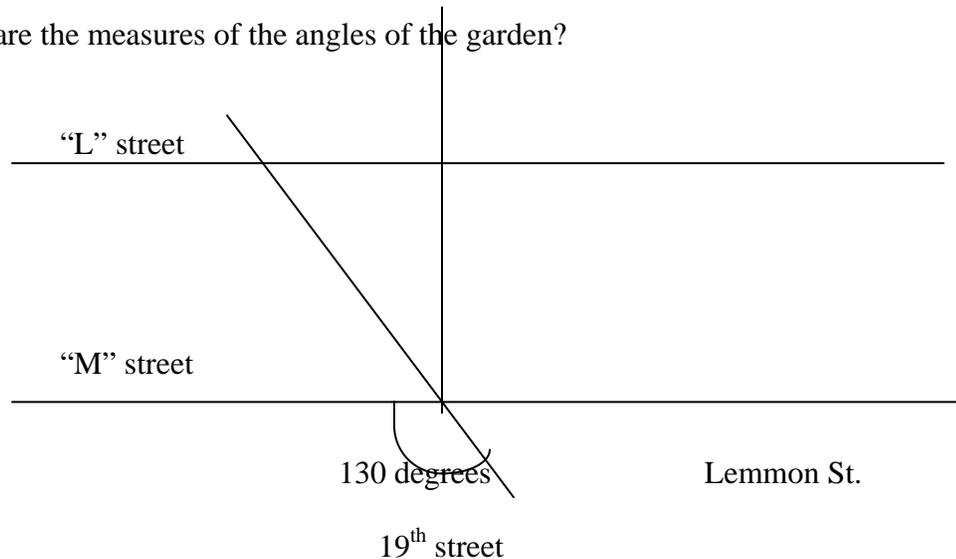
(90, 50, 40)

2. At a restaurant the cost for a breakfast plate and a small glass of milk is $2.10. The cost for two breakfast plates and three glasses of milk is $5.15. Which pair of equations can be used to determine the cost of one breakfast plate (B) and the cost of a glass of milk (M)?

B + M = 2.10   B + M= 2.10
2B + 2M = 5.15   3B + 3M = 5.15

B + M = 2.10   B + M = 2.10
3B + 2M = 5.15   ⟶   2B + 3M = 5.15

3. What is the probability of having heads come up four times in a row flipping a coin?
        1: 2^4 or 1:16 or 0.0625

4. How many face and edges does a square pyramid have?
     (5 faces, 8 edges)

5. The algebraic form of a linear function is: d = ¼ l, where d is the distance in miles and l is the number of laps. Which of the following choices identifies the same linear function?
     a. For every 4 laps, an athlete runs 2 miles.
     b. For every 1 lap, an athlete runs 4 miles
     c. For every 8 laps, an athlete runs 2 miles ⟵
     d. For every 12 laps, an athlete runs 4 miles

Average cognitive abilities for 16 years old (continued)
Advance items (continued)

6. Robert needed six batteries and is choosing from two brands of AAA batteries for his calculator. Brand A costs $5.50 for a package of three batteries, and Brand B costs 2.50 for a two battery pack. What percent of cost of Brand A batteries did Robert save if he bought the batteries of Brand B?
(31.8%)

7. A fence around a square garden has a perimeter of 48 feet. What is the approximate length of the diagonal?

   (16.98 or approx. 17 feet)

8. Create a problem in which the following formula would be used:

$$5 + 3x = 20$$

Answers can be any items or theme; however, the essential problem should contain a constant of 5 and unknown values for three other items with a result of 20. The "problem" cannot simply be a statement of the operations, such as "five plus the product of three and X that sums to 20." The problem must have an application to a created circumstance.

Examples: John bought a pen for $5 and three reams of paper for a total of $20. How much did each ream cost?

Jane went to the grocery store and bought a large carton of milk for 5 dollars and three steaks. Her total was $20. How much each steak cost?