Answers:

1. The ratio of buses to cars can be expressed as $2x$: $23x$. We can write an equation that represents the fact that there are 630 fewer buses than cars: $2x + 630 = 23x$.

Solving this equation for x yields the following:

$2x + 630 = 23x$
$630 = 21x$
$30 = x$.

There are $23x$ cars on River Road which equals $23 \times 30 = 690$ cars. The correct answer is D.

2. Simplify this equation by factoring out 49 from the numerator and the denominator as follows:

$$\frac{49 + 49}{\overline{49(1 + 49)}} =$$

$$\frac{49(2)}{\overline{49\ (1+49)}} = \frac{2}{50} = \frac{1}{25}$$

The correct answer is B.

3. Recognize here the basic form $(x - y)^2$, which equals $x^2 - 2xy + y^2$.
$\sqrt{7+\sqrt{29}}$ corresponds here to x, and $\sqrt{7-\sqrt{29}}$

So the expression can be simplified to:

$$\left(\sqrt{7+\sqrt{29}}\right)^2 - 2\left(\sqrt{7+\sqrt{29}}\right)\left(\sqrt{7-\sqrt{29}}\right) + \left(\sqrt{7-\sqrt{29}}\right)^2 \rightarrow$$

$$7+\sqrt{29} - 2\sqrt{\left(7+\sqrt{29}\right)\left(7-\sqrt{29}\right)} + 7 - \sqrt{29} \rightarrow$$

$$14 - 2\sqrt{\left(7+\sqrt{29}\right)\left(7-\sqrt{29}\right)}$$

Under the radical, recognize the basic form $(a + b)(a – b)$, which equals $a^2 – b^2$.

The expression can be further simplified to:

$$14 - 2\sqrt{49-29} \rightarrow$$

$$14 - 2\sqrt{20} \rightarrow$$

$$14 - 4\sqrt{5}$$

The correct answer is C.

4. If the square root of p^2 is an integer, p is a perfect square. Let's take a look at 36, an example of a perfect square to extrapolate some general rules about the properties of perfect squares.

Statement I: 36's factors can be listed by considering pairs of factors (1, 36) (2, 18) (3,12) (4, 9) (6, 6). We can see that they are 9 in number. In fact, for any perfect square, the number of factors will always be odd. This stems from the fact that factors can always be listed in pairs, as we have done above. For perfect squares, however, one of the pairs of factors will have an identical pair, such as the (6,6) for 36. The existence of this "identical pair" will always make the number of factors *odd* for any perfect square. Any number that is not a perfect square will automatically have an *even* number of factors. Statement I must be true.

Statement II: 36 can be expressed as 2 x 2 x 3 x 3, the product of 4 prime numbers.
A perfect square will always be able to be expressed as the product of an even number of prime factors because a perfect square is formed by taking some integer, in this case 6, and squaring it. 6 is comprised of one two and one three. What happens when we square this number? $(2 \times 3)^2 = 2^2 \times 3^2$. Notice that each prime element of 6 will show up *twice* in 6^2. In this way, the prime factors of a perfect

square will always appear *in pairs*, so there must be an even number of them. Statement II must be true.

Statement III: p, the square root of the perfect square p^2 will have an odd number of factors if p itself is a perfect square as well and an even number of factors if p is not a perfect square. Statement III is not necessarily true.

The correct answer is D, both statements I and II must be true.

5. (1) INSUFFICIENT: This gives the definition of the $ function, however, it gives us no information about p and q.

(2) INSUFFICIENT: This statement gives us no information about the $ function.

(1) AND (2) SUFFICIENT: We can use the definition of the $ function given in (1) along with the values of p and q from (2) to solve for the value of $p \$ q = 2(4)2 - 10 = 6$.

The correct answer is C.

6. At the point where a curve intercepts the x-axis (i.e. the x intercept), the y value is equal to 0. If we plug $y = 0$ in the equation of the curve, we get $0 = (x - p)(x - q)$. This product would only be zero when x is equal to p or q. The question is asking us if (2, 0) is an x-intercept, so it is really asking us if either p or q is equal to 2.

(1) INSUFFICIENT: We can't find the value of p or q from this equation.

(2) INSUFFICIENT: We can't find the value of p or q from this equation.

(1) AND (2) SUFFICIENT: Together we have enough information to see if either p or q is equal to 2. To solve the two simultaneous equations, we can plug the p-value from the first equation, $p = -8/q$, into the second equation, to come up with $-2 + 8/q = q$.

This simplifies to $q^2 + 2q - 8 = 0$, which can be factored $(q + 4)(q - 2) = 0$, so $q = 2, -4$.
If $q = 2$, $p = -4$ and if $q = -4$, $p = 2$. Either way either p or q is equal to 2.

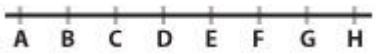
The correct answer is C.

7. In order to determine the median of a set of integers, we need to find the "middle" value.

(1) SUFFICIENT: Statment one tells us that average of the set of integers from 1 to x inclusive is 11. Since this is a set of consecutive integers, the "average" term is always the exact middle of the set. Thus, in order to have an average of 11, the set must be the integers from 1 to 21 inclusive. The middle or median term is also is 11.

(2) SUFFICIENT: Statement two states that the range of the set of integers from 1 to x inclusive is 20. In order for the range of integers to be 20, the set must be the integers from 1 to 21 inclusive. The median term in this set is 11.

The correct answer is D.

8. 

The distance from G to H is $5^{13} - 5^{12}$.

The distance between and two consecutive points is constant, so the distance from A to G will be 6 times the distance from G to H or $6(5^{13} - 5^{12})$.

The value of A, therefore, will be equal to the value of G minus the distance from A to G:

$5^{12} - 6(5^{13} - 5^{12}) \longrightarrow 5^{12} - 6[5^{12}(5 - 1)] \longrightarrow 5^{12} - 6(5^{12})(4) \longrightarrow 5^{12}(1 - 24) \longrightarrow (-23)5^{12}$.

The correct answer is B.

9. If we multiply both sides of the equation by (x + 2), we get 1.5x + 3 = 1.8.

If we multiply both sides of the equation by 2, we get 3x + 6 = 3.6

Further simplifying, 3x = -2.4, so x = -0.8.

The correct answer is B.

10. From the diagram, we see that all 6 of the labeled angles add up to 360°:

3a + 3b = 360
a + b = 120 (a = 120 – b or b = 120 – a)

(1) SUFFICIENT: We can use the value of a to solve for b (b = 120 - 35 = 85). We can then see that b > a.

(2) SUFFICIENT: If a < 60 and b = 120 - a, then b = 120 - *less than 60.*

Therefore, b must be greater than 60 and consequently greater than a.

The correct answer is D.

11. We can determine the sales revenue that the sales associate generated by analyzing her commission earnings for the week.

(1) SUFFICIENT: The sales associate earned a total of $1500 in commission last week. We know that on the first $10,000 in sale revenue, the associate earns 8% or $800 in commission. This means that the associate earned $700 in additional commission. Since this additional commission is calculated based on a 10% rate, the sales associate must have generated an additional $7000 worth of sales revenue. Thus, we know from statement 1 that the sales associate generated $10,000 + $7000 = $17,000 in sales revenue last week. Statement 1 alone is sufficient.

(2) SUFFICIENT: The sales associate was eligible for the 10% commission rate on $7000 worth of sales. Since the 10% rate only kicks in after the first $10,000 in sales, this means that the sales associate generated $7000 in sales revenue *above* the $10,000 threshold. Thus, we know from statement 2 that the sales associate generated $10,000 + $7000 = $17,000 in sales revenue last week. Statement 2 alone is sufficient.

The correct answer is D.

12. $$\frac{15^x + 15^{x+1}}{4^y} = 15^y$$

$(15^x + 15^{x+1}) = 15^y 4^y$
$[15^x + 15^x(15^1)] = 15^y 4^y$
$(15^x)(1 + 15) = 15^y 4^y$
$(15^x)(16) = 15^y 4^y$
$(3^x)(5^x)(2^4) = (3^y)(5^y)(2^{2y})$

Since both sides of the equation are broken down to the product of prime bases, the respective exponents of like bases must be equal.

$2y = 4$ so $y = 2$.
$x = y$ so $x = 2$.

The correct answer is A.

13. We can solve this question as a VIC (Variable in answer choices) by plugging in values for x, y and z:

x	percent mark-up (1st)	10
y	percent discount (2nd)	20
z	original price	100

If a $100 item is marked up 10% the price becomes $110. If that same item is then reduced by 20% the new price is $88.

If we plug $x = 10$, $y = 20$, $z = 100$ into the answer choices, only answer choice (A) gives us 88:

If we plug $x = 10$, $y = 20$, $z = 100$ into the answer choices, only answer choice (A) gives us 88:

$$\frac{10{,}000(100) + 100(100)(10 - 20) - (10)(20)(100)}{10{,}000} = 88$$

The correct answer is A.

14. For an overlapping set problem we can use a double-set matrix to organize our information and solve. Because the values here are percents, we can assign a value of 100 to the total number of lights at Hotel California. The information given to us in the question is shown in the matrix in boldface. An x was assigned to the lights that were "Supposed To Be Off" since the values given in the problem reference that amount. The other values were filled in using the fact that in a double-set matrix the sum of the first two rows equals the third and the sum of the first two columns equals the third.

	Supposed To Be On	Supposed To Be Off	TOTAL
Actually on		**$0.4x$**	**80**
Actually off	**$0.1(100 - x)$**	$0.6x$	20
TOTAL	$100 - x$	**x**	**100**

Using the relationships inherent in the matrix, we see that:
$0.1(100 - x) + 0.6x = 20$
$10 - 0.1x + 0.6x = 20$
$0.5x = 10$ so $x = 20$

We can now fill in the matrix with values:

	Supposed To Be On	Supposed To Be Off	TOTAL

Actually on	72	8	80
Actually off	8	12	20
TOTAL	80	20	100

Of the 80 lights that are actually on, 8, or 10% percent, are supposed to be off.

The correct answer is D.

15. To determine the value of $10 - x$, we must determine the exact value of x. To determine the value of x, we must find out what digits a and b represent. Thus, the question can be rephrased: What is a and what is b?

(1) INSUFFICIENT: This tells us that x rounded to the nearest hundredth must be 1.44. This means that a, the hundredths digit, might be either 3 (if the hundredths digit was rounded up to 4) or 4 (if the hundredths digit was rounded down to 4). This statement alone is NOT sufficient since it does not give us a definitive value for a and tells us nothing about b.

(2) SUFFICIENT: This tells us that x rounded to the nearest thousandth must be 1.436. This means, that a, the hundredths digit, is equal to 3. As for b, the thousandths digit, we know that it is followed by a 5 (the ten-thousandths digit); therefore, if x is rounded to the nearest thousandth, b must rounded UP. Since b is rounded UP to 6, then we know that b must be equal to 5. Statement (2) alone is sufficient because it provides us with definitive values for both a and b.

The correct answer is B.

16. It is tempting to view the information in the question as establishing a pattern as follows:

Green, Yellow, Red, Green, Yellow, Red, . . .

However, consider that the following non-pattern is also possible:

Green, Yellow, Red, Green, Green, Green, Green . . .

(1) INSUFFICIENT: This tells us that the 18th tile is Green or Red but this tells us nothing about the 24th tile. Statement (1) alone is NOT sufficient.

(2) INSUFFICIENT: This tells us that the 19th tile is Yellow or Red but this tells us nothing about the 24th tile. Statement (2) alone is NOT sufficient.

(1) AND (2) INSUFFICIENT: Together, the statements yield the following possibilities for the 18th and 19th tiles:

GY, GR, RY, or RR

However, only GY adheres to the rules given in the question. Thus, we know that tile 18 is green and tile 19 is yellow. However, this does not help us to determine the color of the next tile, much less tile 24 (the one asked in the question). For example, the *next* tile (tile 20) could be green or red. Thus, the statements taken together are still not sufficient.

The correct answer is E.

17. (1) INSUFFICIENT: If we simplify the inequality by adding 3 to both sides and dividing by 2, we get $x < 4$. There are an infinite number of x values less than 4.

(2) INSUFFICIENT: If we simplify the inequality by dividing both sides by -4 and switching the direction of the inequality, we get $x > 2$. There are an infinite number of x values greater than 2.

(1) AND (2) SUFFICIENT: If x is an integer and $2 < x < 4$, x must equal 3.

The correct answer is C.

18. 84 is the 12th multiple of 7. (12 x 7 = 84)
140 is the 20th multiple of 7.
The question is asking us to sum the 12th through the 20th multiples of 7.

The sum of a set = (the mean of the set) x (the number of terms in the set)
There are 9 terms in the set: 20th - 12th + 1 = 8 + 1 = 9
The mean of the set = (the first term + the last term) divided by 2: (84 + 140)/2 = 112
The sum of this set = 112 x 9 = 1008

Alternatively, one could list all nine terms in this set (84, 91, 98 ... 140) and add them.
When adding a number of terms, try to combine terms in a way that makes the addition easier
(i.e. 98 + 112 = 210, 119 + 91 = 210, etc).

The correct answer is C.

19. Begin by counting the number of relationships that exist among the 7 individuals whom we will call A, B, C, D, E, F, and G.

First consider the relationships of individual A: AB, AC, AD, AE, AF, AG = 6 total. Then consider the relationships of individual B without counting the relationship AB that was already counted before: BC, BD, BE, BF, BG = 5 total. Continuing this pattern, we can see that C will add an additional 4 relationships, D will add an additional 3 relationships, E will add an additional 2 relationships, and F will add 1 additional relationship. Thus, there are a total of 6 + 5 + 4 + 3 + 2 + 1 = 21 total relationships between the 7 individuals.

We are told that 4 people have exactly 1 friend. This would account for 2 "friendship" relationships (e.g. AB and CD). We are also told that 3 people have exactly 2 friends. This would account for another 3 "friendship" relationships (e.g. EF, EG, and FG). Thus, there are 5 total "friendship" relationships in the group.

The probability that any 2 individuals in the group are friends is 5/21. The probability that any 2 individuals in the group are not friends = 1 – 5/21 = 16/21. The correct answer is E.

20. Since $BE \parallel CD$, triangle ABE is similar to triangle ACD (parallel lines imply two sets of equal angles). We can use this relationship to set up a ratio of the respective sides of the two triangles:

$$\frac{AB}{AC} = \frac{AE}{AD}$$

$$\frac{3}{6} = \frac{4}{AD}$$

So $AD = 8$.

We can find the area of the trapezoid by finding the area of triangle CAD and subtracting the area of triangle ABE.

Triangle CAD is a right triangle since it has side lengths of 6, 8 and 10, which means that triangle BAE is also a right triangle (they share the same right angle).

Area of trapezoid = area of triangle CAD – area of triangle BAE
$= (1/2)bh - (1/2)bh$
$= 0.5(6)(8) - 0.5(3)(4)$
$= 24 - 6$
$= 18$

The correct answer is B.

21. (1) INSUFFICIENT: If we subtract $3x$ from both sides and factor out an x, we get:
$x(x + 3)(x - 1) = 0$, so $x = -3, 0$, or 1.

(2) INSUFFICIENT: This can be factored as $(x - 5)(x + 3) = 0$, so $x = -3$ or 5.

(1) AND (2) SUFFICIENT: With the two statements together we know x must equal -3.

The correct answer is C.

22. m/n will be an integer if m is divisible by n. For m to be divisible by n, the elements of n's prime box (i.e. the prime factors that make up n) must also appear in m's prime box.

(1) INSUFFICIENT: If $2m$ is divisible by n, the elements of n's prime box are in $2m$'s prime box. However, since $2m$ contains a 2 in its prime box because of the coefficient 2, m alone may not have all of the elements of n's prime box. For example, if $2m = 6$ and $n = 2$, $2m$ is divisible by n but m is not.

(2) SUFFICIENT: If m is divisible by $2n$, m's prime box contains a 2 and the elements of n's prime box. Therefore m must be divisible by n.

The correct answer is B.

23. Begin by assigning variables to the unknown quantities:

L = left-handed writers
R = right-handed writers

Then, write equations using the information given in the problem.

$L + R = 80$ and $L = R + 12$

Substitute the second equation into the first equation to solve for R as follows:

$L + R = 80$
$(R + 12) + R = 80$
$2R = 68$
$R = 34$

The question asks for the number of writers who are NOT left-handed which is the same as asking for the number of right-handed writers (34). The correct answer is C.

24. The fact that the quotient $\frac{ab^2}{c}$ is even tells us that the numerator ab^2 is even.

If ab^2 were odd, the quotient would never be divisible by 2, regardless of what c is. To prove this try to divide an odd number by any integer to come up with an even number; you can't. If ab^2 is even, either a is even or b is even.

(I) TRUE: Since a or b is even, the product ab must be even

(II) NOT NECESSARILY: For the quotient to be positive, a and c must have the same sign since b^2 is definitely positive. We know nothing about the sign of b. The product of ab could be negative or positive.

(III) NOT NECESSARILY: For the quotient to be even, ab^2 must be even but c could be even or odd. An even number divided by an odd number could be even (ex: 18/3), as could an even number divided by an even number (ex: 16/4).

The correct answer is A.

25. The solution to a problem such as this often *looks* less appealing than some of the incorrect answers. Thus, it is important to methodically analyze each answer choice.

A: $\frac{5}{7} \times \frac{5}{7} = \frac{25}{49}$. This is approximately 1/2, which is less than 2/3

B: Any fraction between 0 and 1 multiplied by itself will *decrease* in value. Thus (2/3) multiplied by itself will yield a result that is less than 2/3.

C. (0.7) × (0.7) = 0.49. This is approximately 1/2, which is less than 2/3.

D. $(0.9)^2 \times (0.9)^2 = (0.81) \times (0.81)$. This is approximately 0.65, which is less than 2/3.

E: $\frac{0.08}{0.003} = \frac{80}{3}$. This is approximately 27.

Then, 27 × 27 is clearly greater than 2/3.

The correct answer is E.

26. The circumference of the circle is $4\sqrt{\pi\sqrt{3}}$. We can use this information to find the area of the circular base.

$$Circumference = 2\pi r$$
$$4\sqrt{\pi\sqrt{3}} = 2\pi r$$
$$\left(4\sqrt{\pi\sqrt{3}}\right)^2 = (2\pi r)^2$$
$$16\pi\sqrt{3} = 4\pi^2 r^2$$
$$r^2 = \frac{4\sqrt{3}}{\pi}$$

$$Area = \pi r^2$$
$$A = \pi\left(\frac{4\sqrt{3}}{\pi}\right)$$
$$A = 4\sqrt{3}$$

Because the probability of the stone landing outside the triangle is 3/4 , the triangle must comprise 1/4 of the area of the circular base.

The height of an equilateral triangle splits the triangle into two 30-60-90 triangles (Each 30-60-90 triangle has sides in the ratio of 1: $\sqrt{3}$: 2). Because of this, the area for an equilateral triangle can be expressed in terms of one side. If we call the side of the equilateral triangle, *s*, the height must be ($s\sqrt{3}$) / 2 (using the 30-60-90 relationships).
The area of a triangle = 1/2 × base × height, so the area of an equilateral triangle can be expressed as: 1/2 × s × ($s\sqrt{3}$) / 2 .

Here the triangle has an area of $\sqrt{3}$, so:
$\sqrt{3} = 1/2 \times s \times (s\sqrt{3}) / 2$
$s = 2$

The correct answer is E.

27. We can rephrase the question by opening up the absolute value sign. There are two scenarios for the inequality $|n| < 4$.
If $n > 0$, the question becomes "Is $n < 4$?"
If $n < 0$, the question becomes: "Is $n > -4$?"
We can also combine the questions: "Is $-4 < n < 4$?" (n is not equal to 0)

(1) SUFFICIENT: The solution to this inequality is $n > 4$ (if $n > 0$) or $n < -4$ (if $n < 0$). This provides us with enough information to guarantee that n is definitely NOT between -4 and 4. Remember that an absolute no is sufficient!

(2) INSUFFICIENT: We can multiply both sides of the inequality by $|n|$ since it is definitely positive. To solve the inequality $|n| \times n < 1$, let's plug values. If we start with negative values, we see that n can be any negative value since $|n| \times n$ will always be negative and therefore less than 1. This is already enough to show that the statement is insufficient because n may not be between -4 and 4.

The correct answer is A.

28. The question asks about the sign of d.

(1) INSUFFICIENT: When two numbers sum to a negative value, we have two possibilities:

Possibility A: Both values are negative (e.g., $e = -4$ and $d = -8$)
Possibility B: One value is negative and the other is positive.(e.g., $e = -15$ and $d = 3$).

(2) INSUFFICIENT: When the difference of two numbers produces a negative value, we have three possibilities:

Possibility A: Both values are negative (e.g., $e = -20$ and $d = -3$)
Possibility B: One value is negative and the other is positive (e.g., $e = -20$ and $d = 3$).
Possibility C: Both values are positive (e.g., $e = 20$ and $d = 30$)

(1) AND (2) SUFFICIENT: When d is ADDED to e, the result (-12) is greater than when d is SUBTRACTED from e. This is only possible if d is a positive value. If d were a negative value than adding d to a number would produce a smaller value than subtracting d from that number (since a double negative produces a positive). You can test numbers to see that d must be positive and so we can definitively answer the question using both statements.

29. (1) INSUFFICIENT: If we test values here we find two sets of possible x and y values that yield conflicting answers to the question.

x	$\sqrt{x}$	y	Is $x > y$?
4	2	1	YES
1/4	1/2	1/3	NO

(2) INSUFFICIENT: If we test values here we find two sets of possible x and y values that yield conflicting answers to the question.

x	x^3	y	Is $x > y$?
2	8	1	YES
-1/2	-1/8	-1/4	NO

(1) AND (2) SUFFICIENT: Let's start with statement 1 and add the constraints of statement 2. From statement 1, we see that x has to be positive since we are taking the square root of x. There is no point in testing negative values for y since a positive value for x against a negative y will always yield a yes to the question. Lastly, we should consider x values between 0 and 1 and greater than 1 because proper fractions behave different than integers with regard to exponents. When we try to come up with x and y values that fit both conditions, we must adjust the two variables so that x is always greater than y.

x	$\sqrt{x}$	x^3	y	Is $x > y$?
2	1.4	8	1	YES
1/4	1/2	1/64	1/128	YES

Logically it also makes sense that if the cube and the square root of a number are both greater than another number than the number itself must be greater than that other number.

The correct answer is C.

30. First we must find the total number of 5 member teams, with our without John and Peter. We can solve this using an anagram model in which each of the 9 players (A – I) is assigned either a Y (for being chosen) or an N (for not being chosen):

Player	A	B	C	D	E	F	G	H	I
Chosen ?	Y	Y	Y	Y	Y	N	N	N	N

It is the various arrangements of Y's and N's above that would yield all of the different combinations, so we can find the number of possible teams here by considering how many anagrams of YYYYYNNNN exist:

$$\frac{9!}{5!\,4!} = \frac{9 \times 8 \times 7 \times 6 \times 5}{5 \times 4 \times 3 \times 2 \times 1} = (3 \times 7 \times 6) = 126$$

(because there are 9! ways to order 9 objects)
(because the 5Y's and 4N's are identical)

So there are 126 possible teams of 5. Since the question asks for the probability of choosing a team that includes John and Peter, we need to determine how many of the 126 include John and Peter. If we reserve two of the 5 spots on a team for John and Peter, there will be 3 spots left, which must be filled by 3 of the remaining 7 players (remember John and Peter were *already* selected). Therefore the number of teams including John and Peter will be equal to the number of 3-player teams that can be formed from a 7-player pool. We can approach the problem as we did above:

Player	A	B	C	D	E	F	G
Chosen	Y	Y	Y	N	N	N	N

The number of possible YYYNNNN anagrams is:

$$\frac{7!}{3!\,4!} = \frac{7 \times 6 \times 5}{3 \times 2 \times 1} = 35$$

Since 35 of the total possible 126 teams include John and Peter, the probability of selecting a team with both John and Peter is 35/126 or 5/18.

The correct answer is D.

31. We can factor the equation in the question :

$$\frac{(y + 4)(y - 4)}{3x} = \frac{y - 4}{6}$$

Since $y \neq 4$, we can then simplify: $\frac{(y + 4)\cancel{(y - 4)}}{3x} = \frac{\cancel{y - 4}}{6}$

Finally, $y + 4 = \frac{x}{2}$, so $y = \frac{x - 8}{2}$

Alternatively we could solve this question as a VIC (Variable in answer choice) by plugging a value for x.

If $x = 2$, the original equation becomes $y^2 - 16 = y - 4$ or $(y + 4)(y - 4) = y - 4$
Since we are told that y does not equal 0, we can divide both sides by $(y - 4)$ to get $y + 4 = 1$.
This means that $y = -3$ when $x = 2$.

Unfortunately two answer choices yield a y value of -3 when $x = 2$ (both B and C). In this case we would have to repeat the process

for a different x value. $x = 4$, $y = -2$ only works for answer choice B. The correct answer is B.

32. We can solve this problem as a VIC (Variable In answer Choice) and plug in values for the variable x. Let's say $x = 6$. (Note that there is a logical restriction here in terms of the value of x. Lindsay has to have a rate of less than less than 1 room per hour if she needs Joseph's help to finish in an hour).

If Lindsay can paint 1/6 of the room in 20 minutes (1/3 of an hour), her rate is 1/2.
$rt = w$
$r(1/3) = 1/6$
$r = 1/2$

Let J be the number of hours it takes Joseph to paint the entire room. Joseph's rate then is $1/J$. Joseph and Lindsay's combined rate is $3/2 + 1/J$, which can be simplified:

$1/2 + 1/J \longrightarrow J / 2J + 2 / 2J \longrightarrow (J + 2) / 2J$

If the two of them finish the room in one hour, using the formula of $rt = w$, we can solve for J.

$rt = w$ and $t = 1$ (hour), $w = 1$ (job)

$((J + 2) / 2J)(1) = 1 \longrightarrow J + 2 = 2J \longrightarrow J = 2$

That means that Joseph's rate is 1/2, the same as Lindsay's. The question though asks us what fraction of the room Joseph would complete in 20 minutes, or 1/3 of an hour.
$rt = w$
$(1/2)(1/3) = w$
$w = 1/6$

Now we must look at the answer choices to see which one is equal to 1/6 when we plug in $x = 6$. Only C works: $(6 – 3) / 18 = 1/6$.

The correct answer is C.

33. We can rewrite the information in the question as an equation representing the T, the total dollar value of the sale:

L + M + S = T

L = the dollar amount received by the partner with the largest share
M = the dollar amount received by the partner with the middle (second largest) share
S = the dollar amount received by the partner with the smallest share

We are also told in the question that L = (5/8)T. Thus we can rewrite the equation as follows:

(5/8)T + M + S = T.

Since the question asks us the value of S, we can simplify the equation again as follows:

S = M + (3/8)T

Thus, in order to solve for S, we will need to determine the value of both M and T. The question can be rephrased as, what is the value of M + (3/8)T?

(1) NOT SUFFICIENT: The first statement tells us that S = (1/5)M. This gives us no information about T so statement one alone is not sufficient.

(2) SUFFICIENT: The second statement tells us that M = (1/2)L = $1 million. Additionally, since we know from the question that L = (5/8)T, then M must be equal to 1/2 of 5/8(T) or 5/16(T). We can therefore solve for T as follows:

$$M = \$1{,}000{,}000 = \frac{5}{16}T$$

$3,200,000 = T

We can now easily solve for S:

L + M + S = T
2 million + 1 million + S = $3.2 million

S = .2 million

Therefore, statement (2) alone is sufficient. The correct answer is B.

34. (1) SUFFICIENT: We can rewrite this equation in a base of 3: $3^{b+2} = 3^5$, which means that $b + 2 = 5$ and therefore $b = 3$.

We can plug this value into the equation $a = 3^{b-1}$ to solve for a.

(2) SUFFICIENT: We can set the right side of this equation equal to the right side of the equation in the quesiton (both sides equal a).

$3^{b-1} = 3^{2b-4}$, which means that $b - 1 = 2b - 4$ and therefore $b = 3$. We can plug this value into the equation $a = 3^{b-1}$ to solve for a.

The correct answer is D.

35. Let x be the length of an edge of the cube. We can find the length of BC by first finding the length of CD. CD must be $x\sqrt{2}$ since it is the hypotenuse of a 45-45-90 triangle with legs of length x.

Using the Pythagorean theorem, BC can be calculated:
$BC = \sqrt{x^2 + (x\sqrt{2})^2} = x\sqrt{3}$

$AB = CD = x\sqrt{2}$, so $BC - AB = x\sqrt{3} - x\sqrt{2}$.
If we factor this expression and simplify, $x(\sqrt{3} - \sqrt{2}) \approx x(1.7 - 1.4) \approx 0.3x$.

Since $BC - AB \approx 0.3x$ and $AC = x$, the difference between BC and AB is equal to approximately 30% of AC.

The correct answer is C.

36. There are 3 × 2 × 4 = 24 possible different shirt-sweater-hat combinations that Kramer can wear. He wears the first one on a Wednesday. The following Wednesday he will wear the 8th combination. The next Wednesday after that he will wear the 15th

combination. The next Wednesday after that he will wear the 22nd combination. On Thursday, he will wear the 23rd combination and on Friday he will wear the 24th combination.

Thus, the first day on which it will no longer be possible to wear a new combination is Saturday. The correct answer is E.

37. One way to avoid a lot of computation on the GMAT is to look for patterns. In this case, notice that you can factor out .1111 from each of the four terms as follows:

.1111(9 + 8 + 7 + 6) = .1111(30) = 3.333

The correct answer is C.

1. The correct answer is E.

The original sentence begins with the modifier "hoping to alleviate some of the financial burdens...", which clearly describes the county government. However, the county government is not the subject of the main clause. We need to find a choice that makes it the subject. Moreover, the sentence is unnecessarily passive. We should look for an active version. Finally, "raised by an eleven percent increase" is redundant. We can say "raised by eleven percent" or "increased by eleven percent" but we do not need both.

The only choice to address all the issues is E.

2. The correct answer is D.

The subject of the original sentence is "the mountain cornfloss," which is singular. However, the main verb is "grow," which is plural. We need to replace "grow" with "grows". Moreover, "thought of as being" is wordy and awkward. We need to find a more elegant way to phrase this.

Choice D corrects the subject-verb issue and also finds a more economical phrasing in "and thought to be".

3. The correct answer is B.

The dentists argue that adding fluoride to tap water lulls people into a false sense of dental security because they rely too heavily on the fluoride to do work they should do for themselves. This argument, however, assumes that most people are aware that the fluoride is added to the water. If this were not the case, the argument would be seriously weakened because the dentists could not claim that people rely in the fluoride. Only choice B addresses this.

4. The correct answer is D.

The passage states that health savings accounts will undermine the health of the public because people will not use them for preventive

care. Furthermore, people who cannot afford them will not be able to receive even basic care such as vaccinations. We are asked to draw a conclusion based on this information.

Choice A states that wealthy individuals will not be affected negatively by the accounts. We do not have enough information to draw this conclusion. Incorrect.

Choice B states that private health insurance will no longer be available. The passage does not offer information that would justify this choice. Incorrect.

Choice C states that most diseases are detected during regular preventive examinations. We do not have enough information to justify this choice. Incorrect.

Choice D states that some people without the accounts are likely to contract infectious diseases. This conclusion can be drawn from the fact that people without the accounts will not receive vaccinations against infectious diseases and this will result in a threat to the public's health. Correct.

Choice E states that the causal relationship between a person's health and medical care has been adequately documented. The passage does not offer any information on this subject. Incorrect.

5. The correct answer is C.

The conclusion is that the use of licenses as identification is un-American. The basis for that claim is that this use would allow the government to restrict the liberty of its people. We are asked to find an assumption underlying this argument.

Choice A does not connect the concept of "un-Americanness" to restrictions on liberties. Therefore it cannot complete the logic of the argument. Incorrect.

Choice B does not connect the concept of "un-Americanness" to restrictions on liberties. Therefore it cannot complete the logic of the argument. Incorrect.

Choice C does connect the concept of "un-Americanness" to restrictions on liberties. If this choice is read into the sentence as an additional piece of evidence, it completes the logic of the argument. Correct.

Choice D does not connect the concept of "un-Americanness" to restrictions on liberties. Therefore it cannot complete the logic of the argument. Even if Americans **were** willing to give up their right to move about without identification, the argument would still hold. That is, the imposition of this new restriction could still be considered not in keeping with traditional American values and law.

Choice E does not connect the concept of "un-Americanness" to restrictions on liberties. Therefore it cannot complete the logic of the argument. Incorrect.

6. Hua T'o is mentioned in the following context:

"In his talks, Parker described the state of medical and surgical knowledge--or, rather, scientific ignorance--in China. Despite the surgical feats of legendary ancient doctors like Hua T'o of the third century A.D., surgery did not develop to any great extent in China."

The author mentions Hua T'o as a legendary 3rd century doctor in a sentence that highlights how surgery did not develop significantly in China. The fact that Chinese surgical knowledge was still similar to that of an "ancient" doctor is highlighted to underscore the need to modernize 19th century Chinese medicine.

The correct answer is A.

7. The correct answer is C. While, Parker did not feel that that 19th century Chinese medical practices were advanced, the passage never mentions an emotion similar to "disdain" in describing Parker's feelings to wards these practices.

Answer choice A can be eliminated because the passage states that Parker "acquired a reputation as a surgeon of such skill that the hospital quickly became a general hospital."

Answer choice B can be eliminated because the passage states that Parker "offered free treatment for both rich and poor."

Answer choice D can be eliminated because the passage states that Parker "returned to the United States to raise money and interest in his operations." Additionally, Parker "and his British colleagues formed the Medical Missionary Society of China to coordinate the efforts of all the western hospitals springing up in the trading ports of Asia."

Answer choice E can be eliminated because the passage states that Parker had, "at best, modest success attracting converts to Christianity" suggesting that he did not completely achieve his missionary goals.

8. The question asks for the primary purpose of the passage. In other words, what was the author's agenda in writing the passage? The correct answer must take the entirety of the passage into account without misrepresenting the author's intent.

The correct answer is E. Choice E states that the purpose is to "examine the circumstances of the introduction of Western medicine into 19th century China". This takes the whole of the passage into account without misrepresenting the author's intent. The author focuses on the influence of Peter Parker in bringing Western medicine to China. Correct.

Choice A states that the purpose is to "discuss the status of the medical profession in China before the arrival of Peter Parker". The passage does not focus on this topic, so this choice is incorrect.

Choice B states that the purpose is to "argue that China could not have gained modern medical knowledge without the influence of Peter Parker". The passage does not contain any such argument. This choice is incorrect.

Choice C states that the purpose is to "demonstrate the need in China before the 19th century for outside medical knowledge". The passage focuses on the introduction of Western medicine into China, not the state of medicine in China before the 19th century. Incorrect.

Choice D states that the purpose is to "challenge the predominant view of 19th century Chinese medicine". The passage does not make any such argument. Incorrect.

9. The correct answer is C.

The original sentence contains several errors. First, "like household appliances and automobiles" is incorrect. Since "household appliances and automobiles" are specific examples, "such as" ought to be used instead of "like". The same is true for "food and shelter". Second, the use of "if" in this context is incorrect. On the GMAT, "if" is used only to introduce conditional clauses. It is NOT synonymous with "whether". Third, it is illogical to say that "spending" is a "cyclical pattern". The author clearly means that "spending" follows a "cyclical pattern." Finally, the sentence sets up a comparison so we should look for an answer choice that maintains parallel structure for each element in the comparison.

Choice A repeats the original sentence. Incorrect.

Choice B does not remedy "like" or "is a cyclical pattern." Incorrect.

Choice C remedies all the issues without introducing any new ones. It also nicely reworks the sentence into a parallel structure: "Spending on . . .. whereas spending on . . ." Correct.

Choice D remedies "like" but reconfigures the sentence in a confusing way. Incorrect.

Choice E remedies "like" for "appliances and automobiles" but not for "food and shelter." Also, this choice states that "non-durable goods...remain constant" when what is meant is "spending on non-durable goods...remains constant". Incorrect.

10. The correct answer is D.

The original sentence contains several errors. First, the expression "rather than" requires parallelism, but the original sentence pairs an active verb ("accept") with a passive one ("was sent"). Second, "if" is incorrect when used as a synonym for "whether".

The only answer choice to remedy both issues without creating any new ones is D. Note that "instead of" is incorrect when used with verbs. For example, "I want to swim instead of dance" is incorrect. It should be "I want to swim rather than dance."

11. The correct answer is B.

The original sentence contains the unidiomatic "formed out of" instead of the idiomatic "formed from". Moreover, the relative pronoun "which" must refer to the immediately preceding noun, which in this case is the illogical "Earth." The correct referent is "moon". We need a choice that makes this clear.

The only choice that remedies all the issues without creating new ones is B.

12. The correct answer is E.

The conclusion is that the only way to fix our school systems is to inject new ideas and approaches. The author rejects the notion that spending more money can improve education. We are asked to weaken this argument.

Choice A states only that students that perform highly already are attracted to schools with new approaches. This does not weaken the argument. Incorrect.

Choice B states that schools with playgrounds have better students than schools without them. This is irrelevant. Incorrect.

Choice C states that student performance corresponds closely with the level of their family's education. This does not address the issue of spending. Incorrect.

Choice D states that school employees are generally pleased with the school system. This does not address the core of the argument: that money does not improve student performance.

Choice E states that students from schools that spend more money tend to perform better on standardized tests. This suggests that the claim that money does not improve performance may be wrong. Correct.

13. The correct answer is B.

The conclusion of the argument is that Michelangelo must have completed the painting between 1507 and 1509. The basis for that claim is that the painting depicts a coin that did not exist before 1507 and that it contains a pigment that Michelangelo ceased using in 1509. We are asked to find an assumption that completes the logic of this argument.

Choice A is incorrect. We do not need to assume that no stocks of the pigment existed after 1509. The argument is concerned only with the year in which Michelangelo stopped using the pigment.

Choice B is correct. In order to conclude that the painting must have been completed before 1509 on the basis of the pigment, we must assume that he did not begin the painting before 1509 using the old pigment and complete the painting after 1509 with the new pigment.

Choice C is incorrect. The fact that the general public knew of the coin in 1507 is irrelevant to the conclusion.

Choice D is incorrect. The fact that the panel cannot be tested for age does not relate to either the coin or the pigment, the two bases for the conclusion.

Choice E is incorrect. Whether Michelangelo's painting style changed during this period does not relate to either the coin or the pigment.

14. The correct answer is B.

The first sentence is the author's conclusion. The rest of the text is evidence in support of that conclusion. So we need to find an answer choice that correctly identifies the first sentence as the

conclusion and the second as evidence in support of the conclusion. The only choice to do so is B.

15. The correct answer is A.

The last paragraph states: "The history of free African Americans families in colonial New York and New Jersey, by contrast, is quite different from that of free African Americans in the South. Most were descended from slaves freed by the Dutch West India Company between 1644 and 1664 or by individual owners." The first paragraph states: "However, these cases represent only a small minority of free African Americans in the South. Most free African Americans were actually the descendants of African American men and white servant women." Taken together, these excepts support choice A.

16. The correct answer is C.

This question basically asks us to identify the author's purpose. The answer to a purpose question must take the entirety of the passage into account without misrepresenting its focus. In this passage, the author provides information to support an alternative view of the origins of free African Americans in colonial America. The only choice that reflects this is C.

17. The correct answer is E.

The last two sentences of the last paragraph read: "None of the fourteen families appears to be descended from a white servant woman and an African American man. However, Lutheran church records in the eighteenth century show a few couples like this having children baptized." The last sentence especially suggests that despite the fact that none of the fourteen families studied descended from white servant women, church records indicate that some such families seem to have existed at that time. This is reflected in choice E.

18. The correct answer is B.

The second paragraph begins with "despite the efforts of the various colonial legislatures, white servant women continued to bear children by African American fathers through the late seventeenth century and well into the eighteenth century." This implies that the legislatures took action to prevent these births. This is reflected in choice B.

19. The correct answer is D.

The end of the second paragraph states "It is likely that the majority of the remaining families descended from white women since they first appear in court records in the mid-eighteenth century when slaves could not be freed without legislative approval, and there is no record of legislative approval for their emancipations." This implies that the slaves were not free when they fathered children with these white women. This is reflected in choice D.

20. The correct answer is C.

The text states that preparation, like equipment, is a major factor in the risk of injury during high-risk activities. People who are poorly trained run a higher risk of injury even if provided with the best equipment. From this we can infer that whatever benefits might derive from the best equipment can be negated by improper training. This is choice C.

21. The correct answer is D.

The citizens of Country Y often take vacations in Country X because the exchange rate makes Country X cheaper for citizens of Country Y. But citizens of Country Y rarely buy clothes or electronics in Country X, despite the fact that these items are cheaper in Country X, even with sales tax. We are asked to find a choice that could explain this behavior.

Choice D states that the government of Country Y imposes tariffs on

imported goods. This suggests that perhaps items that are purchased in Country X and brought into Country Y become prohibitively expensive because of the tariffs. This could explain the spending habits of citizens of Country Y. Correct.

22. The correct answer is E.

The conclusion of the argument is that the price of chocolate will increase within six months. The basis for that claim is that the price of cocoa has increased and is likely to stay high. This argument assumes that the current price of chocolate reflects the current price of cocoa. But if manufacturers use cocoa that was purchased before the price increase, the effects of the price increase will not be immediately felt. Only choice E addresses this.

23. The correct answer is C.

The conclusion of the argument is that the price of chocolate will increase within six months. The basis for that claim is that the wholesale price of cocoa has increased. However, if the price of other ingredients in the chocolate has dropped, the decrease could offset the higher price of cocoa and render the argument invalid. The only choice to address this is C.

24. The correct answer is A. The original sentence contains no errors.

Choice B changes the meaning from "may actually increase" to "actually increases". Incorrect.

Choice C is wordy and awkwardly phrased. Incorrect.

Choice D is wordy and awkwardly phrased. Incorrect.

Choice E is wordy and awkwardly phrased. Incorrect.

25. The correct answer is B.

The original sentence contains the wordy expression "are different than", which can be replaced with the more concise "differ from." Moreover, "different than" should not be used when comparing two nouns (modern pigments vs. older ones). The correct expression is "different from". Also, "the ones" can be replaced with the more concise "those". The use of "because" here is also problematic. It is better to state that X differs from Y "in that..." Finally, the pronoun "they" is ambiguous here. Does it refer to the old pigments or to the new?

The only choice to address all these issues is B.

26. The correct answer is C.

The question asks for the purpose of the passage. The passage focuses on an experiment designed to challenge an existing theory about bacteria. The correct answer must take the entirety of the passage into account without misrepresenting its focus.

Choice A states that the purpose is to defend a scientific hypothesis from attack by an innovative technique. This is not consistent with the focus of the passage. Incorrect.

Choice B states that the purpose is to describe a process by which bacteria can be trained to mutate. This does not take the entirety of the passage into account. Incorrect.

Choice C states that the purpose is to present the results of an experiment designed to test an established theory. This is consistent with the focus of the passage. Correct.

Choice D states that the purpose is to argue against an established protocol on the grounds that it is outdated. This is not consistent with the focus of the passage. Incorrect.

Choice E states that the purpose of the passage is to challenge a scientific technique used to prove a questionable theory. This is not consistent with the focus of the passage. Incorrect

27. The correct answer is B.

The question asks us to infer from the passage the reason that the replica plating method is effective. The plating method involved pressing an agar culture on velvet and then transferring that culture to a new agar plate. The resulting pattern of mutant bacteria matched the pattern on the original culture. The author concludes that this indicates that the mutations were already present in the original culture. We can deduce from this that no new mutant bacteria developed after the transfer. Otherwise, the plating technique would not be conclusive. This is consistent with Choice B.

28. The correct answer is D.

The question asks why Fildes and Whitaker conducted the experiment with liquid culture. According to the passage, "because of the possibility that the lack of uniformity of the agar cultures had in fact trained mutant strains, they conducted similar experiments with liquid cultures..." So Fildes and Whitaker used liquid culture because agar culture was not necessarily uniform. This is consistent with Choice D.

29. The original sentence uses the verb singular verb "is" with the plural noun "western states". Moreover, the phrase "the more people that move to western states" is not parallel with "the more pressure on water resources becomes increasingly great." These two parts of the idiomatic construction "the more x, the more y" need to be in the same form. We need to find a replacement.

Choice A is the same as the original sentence. Incorrect.

Choice B repeats the subject-verb mistake of the original and does not rectify the parallelism issue. Incorrect.

Choice C makes the parallelism even worse by beginning with a phrase "with more people moving to western states" that is not capable of sustaining the "the more x, the more y" construction. Incorrect.

Choice D avoids the subject-verb problem but does not remedy the

parallelism issue, since "the more that people move" is not parallel with "the greater the pressure on water resources becomes". Incorrect.

Choice E remedies the subject-verb problem and deals with the parallelism issue with the pair of phrases "the more people move to western states" and "the greater the pressure on water resources becomes." Correct.

30. The correct answer is D. The opening modifier of the original sentence, "though it had about 11 inches of snow," incorrectly describes "the aviation officials" instead of "the runway." We need to find an answer choice in which "runway" is the subject of the opening modifier. Additionally, the original sentence contains a subject-verb error in that the plural "conditions" does not agree with the singular "was acceptable."

Choice A is incorrect because of the modifier and subject-verb agreement issues.

Choice B incorrectly changes the subject of the modifier to "runway conditions" instead of "runway." The runway, not the runway conditions, had 11 inches of snow.

Choice C incorrectly uses the redundant phrase "during the time" instead of "during." Further, the placement of "according to aviation officials" makes it unclear whether the officials stated that the runway "had about 11 inches of snow" or that the runway "was in acceptable condition."

Choice D is correct. The opening modifier correctly describes the runway, the sentence contains proper subject-verb agreement, and this choice does not introduce any new errors.

Choice E incorrectly uses "aviation officials" as the subject of the opening modifier, though it does correct the original subject-verb issue by replacing "was" with "were."

31. The correct answer is B.

The original sentence begins with a comparison ("Unlike lions and tigers"). However, the comparison drawn is between great cats (lions and tigers) and hyoid bones of domestic felines. This is not the correct comparison. We need a choice that draws the comparison between great cats and domestic cats. Moreover, the pronoun "their" is ambiguous: grammatically, it could refer to either lions and tigers or hyoid bones. We need a choice that eliminates the ambiguity.

The only choice to address all the issues is B.

32. The correct answer is A.

The conclusion of the argument is that people should prevent leaks that could allow moisture to collect and nurture mold. The basis for that claim is that mold is often found in areas where there is substantial moisture. In order for this argument to be valid, however, we must assume that the mold itself does not create moisture. If the mold itself is the source of the moisture, then preventing leakage will do nothing to prevent mold. The only choice to address this is A.

33. The correct answer is C.

The passage that heart scans take less time than angiograms and do not require recovery time. They are also more sensitive than angiograms. But they use more radiation than other diagnostic procedures. And finally, their sensitivity can result in detection of harmless abnormalities that may worry patients. We are asked to find among the choices a conclusion that can be drawn on the basis of that information.

Choice A states that a heart scan is safer than an angiogram. We are given no information about the relative safety of the procedures. Incorrect.

Choice B states that patients should not be concerned about heart abnormalities that appear in a heart scan. This misrepresents the

information in the passage. The passage simply stated that the scans may pick up harmless abnormalities, not that all abnormalities are harmless. Incorrect.

Choice C states that a heart scan could result in indirect harm by causing a patient to undergo risky unnecessary procedures. This is supported by the passage, which states that the scans could result in undue concern and treatment. Correct.

Choice D states an angiogram is the appropriate treatment for most patients. The information in the passage does not support this. In fact, if anything, the passage would seem to support the contradictory assertion that heart scans are more appropriate for most patients. Incorrect.

Choice E states that a heart scan is more expensive. We are given no information about cost. Incorrect.

34. The correct answer is D.

The plan limits the number of new buildings that can be constructed in the town in any given year. The rationale for the plan is that it will preserve open spaces and relieve the pressure on schools and other municipal resources. Critics claim that the plan will backfire or fail. We are asked to support this prediction. If the goal of the plan is to prevent overcrowding, then choice D supports the claims of the critics: apartment buildings will draw more residents to the town than would private houses and thus the plan's goals would likely be threatened.

35. The correct answer is A.

The conclusion is that Congress has practiced bad public policy "in failing to increase Pell grants or at least limit their reduction for next year's budget." The basis for that claim is that Pell grants improve access to higher education, which allows lower-income students to improve their economic standing. We are asked to weaken this claim.

Choice A is correct. If total spending on access to higher education

will increase, then Congress has addressed the issue that the author complains about, albeit through means other than Pell grants.

Choice B is incorrect. Whether candidates for Pell grants are aware of their eligibility is irrelevant to the claim about Congress.

Choice C is incorrect. After-school programs in urban communities do not help low-income students afford higher education.

Choice D is incorrect. The amount of the Pell grants is irrelevant. It matters only that they provide some help at all.

Choice E is incorrect. Increasing total spending on education does not necessarily imply that low-income students will have better access to higher education.

36. The correct answer is D.

The question asks us to identify an assumption that the author makes about biographies. This question is open-ended, so the best approach is simply to evaluate the choices one by one. Since an assumption is an unstated piece of evidence that is necessary to complete the logic of an argument, we are looking for an answer choice that completes the logic of the passage.

Choice A: Does the author assume that the main purpose of biographies is to inform readers about key aspects of the subjects' personalities? This is not essential to the logic of the passage. Incorrect.

Choice B: Does the author assume that only subjects who share traits with biographers make good subjects for biographies? This actually contradicts the passage. Incorrect.

Choice C: Does the author assume that compelling biographies cannot be written about ordinary citizens? This is not essential to the logic of the passage. Incorrect.

Choice D: Does the author assume that the biographer's credibility with readers is a factor in the critical success of a biography? Yes. In the second paragraph, the author discusses the biographer's knowledge of his subject's field. If the author did not assume that

this was an important factor, this part of the paragraph would be meaningless. Correct.

Choice E: Does the author assume that practical considerations are most important in the selection of a subject for a biography? While the author does mention practical considerations, these are never implied as "most" important. Incorrect.

37. The correct answer is B.

The question asks for the author's primary concern. In other words, what is the focus of the passage? The correct answer must take the entirety of the passage into account without misrepresenting its focus. The passage focuses on countering some critiques of biography as a discipline. We need to find an answer choice that meshes with this.

Choice A states that the author is primarily concerned with advocating a new approach to an established field of study. This does not conform to the focus of the passage. Incorrect.

Choice B states that the author is primarily concerned with defending a discipline against unwarranted critique. This meshes with what we know about the focus of the passage. Correct.

Choice C states that the author is primarily concerned with arguing against continued reform of an historical endeavor. This does not conform to the focus of the passage. Incorrect.

Choice D states that the author is primarily concerned with refuting an outdated theory of a certain subgenre. This does not conform to the focus of the passage. Incorrect.

Choice E states that the author is primarily concerned with describing a working method of certain authors. This does not conform to the focus of the passage. Incorrect.

38. The correct answer is A.

The question asks why the author mentioned Ron Chernow. The

author mentions Chernow right after disagreeing with the comment that biographers always write about themselves. He cites Chernow as an example of a biographer who has sought out difficult subjects. We need to find an answer choice that is consistent with this.

Choice A states that the author mentions Chernow to provide a counterexample to a general claim about biography. This is consistent with our reading of the passage. Correct.

Choice B states that the author mentions Chernow to illustrate a questionable assertion regarding biography. This implies that the author considers Chernow an example of that questionable assertion. This is not the case. Incorrect.

Choice C states that the author mentions Chernow to establish a favorable comparison with an established biographer. No comparison is made at this point in the passage. Incorrect.

Choice D states that the author mentions Chernow to underscore the important of research in biography. This is not consistent with our reading of the passage. Incorrect.

Choice E states that the author mentions Chernow to challenge a new approach to biography. This is not consistent with our reading of the passage. Incorrect.

39. The correct answer is E.

The original sentence contains several errors. First, "the amount of car accidents" is incorrect. "Amount of" is used only with uncountable nouns. Since accidents are countable, we must use "number of" instead. Second, the comparison ("like accidents caused by faulty wiring") is incorrect here because the comparison is between two numbers, not between a number and a group of accidents. Third, "have been" is incorrect here. This action occurred exclusively in the past, so the simple past ("were relaxed") is needed.

40. The correct answer is D.

The original sentence contains several errors. First, "with an emphasis on color and form at the expense of exact duplication of detail" is a modifier. In this case, however, it modifies "art historians" instead of the logically appropriate "Impressionism." Second, the verb "had evolved" is in the past perfect tense when it should be in the simple past, since it is paired with "have suggested", which is in present perfect.

Choice A is the same as the original sentence. Incorrect.

Choice B does not remedy the modifier issue, though it does fix the tense problem. Incorrect.

Choice C remedies the modifier issue, though it does not fix the tense problem. Incorrect.

Choice D remedies the modifier issue and the tense problem. Correct.

Choice E remedies the modifier issue, but creates an awkward passive construction. Incorrect.

41. The correct answer is E.

The original sentence contains the phrase "ordered that", which requires a clause containing the subjunctive. However, the original sentence has "should" instead. Moreover, it is illogical to test a lake or stream "for mercury levels". Instead, one tests the mercury levels of the lake or stream.
The only choice to address all these issues is E.