## Education testing measurement knowlege

## ASSIGN BUSTER

Please review the following and rework. The following items require additional information. Item Please include a discussion to explain the bias in this item.

Item\#2- The bias has not been correctly identified. The item has 2 bias elements that should be completely described.

Item\#8- The candidate correctly describes the gender bias. The item contain 2 addional bias elements.

Item\#9- The bias has not been correctly described.
The items may possibly contain elitism, gender and age bias.
Please include detailed revision suggestions for all bias items. Item\#4 does not include detailed suggestions on how the bias should be removed from the item.

The Simulated Assessment Instrument
For each item status, enter " Contains Bias" or " Not Biased" where indicated.

If biased, describe in a sentence or two how the item is biased. Provide specific suggestions for revising the item to eliminate bias.

1. Mr. Alvarez is a salesman for a furniture store. Last week, Mr. Alvarez's sales receipts totaled $\$ 25,436$. This week, Mr. Alvarez's sales receipts totaled $\$ 32$, 199. How much more did Mr. Alvarez's sales receipts total this week than last week
A. $\$ 3,363$
B. $\$ 6,763$
C. $\$ 13,363$
D. $\$ 16,763$

Item Status: Biased.

Comments and revision(s) (if necessary):
The item is a problem relating to the sales figures mentioning the word salesman. Use of this word indicates a gender bias as it is an occupation that can be done by both genders. Besides, it can give opinions regarding the performance of people with a similar name. The problem can be stated without the use of a name or the type of store.

Eg: A salesperson's receipts totaled to $\$ 25436$, last week and $\$ 32199$ this week. What is the expected increase in receipts this week
2. Students in the Physics \& Astronomy Club are buying telescopes to watch the upcoming lunar eclipse. They found comparable telescopes, at the following prices, each either on sale or with a special pricing offer:

Name of Student
Original Price
Special Offer
Russell
\$ 600. 00
10\% off
Louis
\$ 450. 00
$15 \%$ off
Amy
\$ 550. 00
\$50 rebate
Stan
\$ 500. 00
5\% off original price and \$35 rebate

Bernie
\$ 480. 00
\$40 rebate
Mike
\$ 500. 00
$12 \%$ off
According to the table, which student saved the most
A. Russell
B. Louis
C. Amy
D. Mike

Item Status: Contains Bias
Comments and revision(s) (if necessary):
The item contains difficult vocabulary such as physics and lunar eclipse that have no bearing on the question.

The item stem is also wordy and unclear. Buying a telescope for watching a lunar eclipse has little to do with savings. It is not necessary to have information of students not found in the choices. Naming the object to be purchased is also not necessary and makes the problem more complicated to understand.

The item also contains gender bias as the number of male student names are more than female student names.

If we also look into the choices, we can note that there is an imbalance.
Three of the choices have \% off and only 1 represents a rebate. It is proper to have equal representation.

The item can be rephrased as:
A certain item was sold at different prices at a store.
Item
Original Price
Special Offer
A
\$ 600. 00
10\% off
B
\$ 450. 00
$15 \%$ off
C
\$ 550. 00
\$50 rebate
D
\$ 480. 00
\$40 rebate
Which of the above gives the maximum saving on the price
a) $B$
b) C
c) $D$
d) A
3. A teacher needs help carrying a class set of textbooks to the department office. The teacher asks five students to carry the 35 books. If each student carried the same number of books, how many books did each student carry A. 5
B. 6
C. 7
D. 8

Item Status: Not Biased
Comments and revision(s) (if necessary):
4. The Johnsons are considering hiring an au pair for their child. One very good applicant requests a stipend of $\$ 800$ per month and health insurance, which will cost them an additional $\$ 250$ per month. Comparable daycare would cost them $\$ 300$ per week. What is the cost difference between the au pair and daycare for a full year
a. The au pair will cost $\$ 3,000$ more.
b. Daycare will cost $\$ 3$, 000 more.
c. Daycare will cost \$1, 440 more.
d. There is no difference in cost.

Item Status: Contains bias
Comments and revision(s) (if necessary):
The item contains a language bias. Use of the term au pair could be confusing vocabulary for certain students. The item can be framed using personal child care and day care service. The answer also reflects that personal baby care is cheaper compared to day care resulting in elitism bias. Mentioning the word good in the item also gives readers and opinion that good applicants are cheaper compared to day care services.

The item can be rephrased as: The cost of personal baby care service per month is \$800 and health insurance equivalent to \$250. Day care for a baby costs $\$ 300$ per week. What is the cost difference between the two services for a year
a) Personal baby care will cost $\$ 3000$ more
b) Day care will cost \$ 3000 more
c) Daycare will cost \$ 1440 more
d) There is no difference in cost.
5. Archeologists discovered the home of a mid 19th century slave family. The home was most likely constructed during the 1840s by Nathaniel Beverley Tucker for a slave called Polly Valentine. Valentine and her family lived in this house until the outbreak of the Civil War.

Mid-19th century slave house of Polly Valentine.
Copyright 2002 Colonial Williamsburg Foundation. All rights reserved.
Graphic from http://www. history. org/History/argy/MHPage/Valentine. htm Use your ruler and the legend to find the perimeter, in feet, of the Polly Valentine House.
A. 12
B. 24
C. 36
D. 72

Item Status: Contains bias
Comments and revision(s) (if necessary): The item contains stereotyping of minorities that may be offensive to some students. Slavery is an emotionally charged issue, and including a question about it out of context offers no benefits and might, in fact, incur costs.

The question could as easily be about the perimeter of the house of Hiram Revels.

The item can be rephrased as:
Archeologists discovered a home believed to be occupied in the mid 19th
century. The home was constructed in the 1840's. Use your ruler and legend to find the perimeter in feet.
6. Loretta's family lives on an Indian reservation in New Mexico. To supplement their meager income, they often sell fry bread at the state fair. The bread, served with honey, sells for $\$ 1.50$ per portion. Loretta's family sold 80 portions by noon. How much money did they make
A. $\$ 75$
B. $\$ 120$
A. $\$ 150$
B. \$ 160

Item Status: Contains bias
Comments and revision(s) (if necessary): This question presents offensive stereotyping of Indians by implying they all live on reservations. It also describes the family income as meager: a demeaning term.

The item can be rephrased as:
A family sells fry bread at the state fair. The bread sells for $\$ 1.50$ per portion. They sold 80 portions by noon. How much money did they make 7. Two people baked a total of 66 chocolate chip cookies for their friends. The first baked 6 more than 3 times the number that the second baked. How many cookies did the first person bake
A. 18
B. 20
C. 51
D. 80

Item Status: Not biased
Comments and revision(s) (if necessary):
8. Mr. Hinton and his wife are making Christmas decorations to give to the old age home. The table below shows the number of Christmas decorations Mr. Hinton and his wife made each day for one week.

Day
Mr. Hinton
Mr. Hinton's Wife
Monday
4
7
Tuesday
3
5
Wednesday
6

4

Thursday
1

5

Friday
5

3

Saturday
9
11
Sunday
7

## 13

How many Christmas decorations did Mr. Hinton and his wife make in all during this week
A. 18
B. 35
C. 52
D. 87

Item Status: Contains bias
Comments and revision(s) (if necessary):
The idea of Christmas or the notion of decorations might be unfamiliar or uncomfortable to students who are not Christians. The item also contains age bias by saying that Christmas decorations are generally given to the old as they are unable to make the same. It also contains elitism bias as giving is a form of donation which clearly shows that the aged are weak have to be donated with. The item can be rephrased as:

Two people A and B made decorations for the festive season. The table below shows how many decorations they made each day for one week. How many decorations did $A$ and $B$ make in all during this week
9. A cat is trapped on the second floor of a burning house. To rescue the cat, the firefighter gets a ladder from his fire truck. The only open window is 24 feet above ground. There is a bush along the edge of the house, the ladder needs to be placed 10 feet from the house. How long of a ladder does the firefighter need to reach the window
A. 25 feet
B. 26 feet
C. 27 feet
D. 28 feet

Item Status: Contains bias
Comments and revision(s) (if necessary):
The item stem is wordy and contains extra information. It needs to be more concise. There is no requirement to mention purpose of rescue, objects around the house and the 'firefighter' term because it has no direct bearing in the question. There was also a gender bias as the term 'his' was associated with the firefighter.

The item can be rephrased as:
To conduct a rescue operation, a person needed to use a ladder long enough to have one end reach 24 feet above ground while the other end braced 10 feet from the wall. How long is the needed ladder

Graphic from http://www. palouse. net/mcctwigg/othwheel. htm
10. In the wheel pictured above, the wooden rim is approximately 6 inches wide and each spoke is approximately 24 inches long. What is the approximate circumference of this wheel
A. 30 inches
B. 48 inches
C. 60 inches
D. 96 inches

Item Status: Not biased

