Exam Prep: CFPA: CFPA - Timed Exam #4

http://www.bobtait-online.com/mod/quiz/review.php?attempt...

Gross weight at take-off......2544 kg
Gross moment index at take-off......653.06
100 kg of fuel on board at take-off [all in the main tanks]
Pilot and three passengers in rows one and two
Each person weighs 77 kg
Eight 20 kg packets in the rear compartment
The aircraft is to be in balance at zero fuel weight as well as at take-off.

The number parcels that must be off-loaded to allow the carriage of two more passengers is -

At take-off	with the fuel in the airc	Craft looks like this.	- 100	1780 -	17.8
	○ 2 ✓	rear	160	5000	80
	○ 1 χ	RI	154	3300	50.81
answer.	none	ACFT	2544	1790	653.06
Choose one	○ 3 x	Item	W	A	100

 ITEM
 WEIGHT
 ARM
 MOMENT
 ZFW

 Gross at T/O
 2544
 653.06

 Add the passengers +154
 4300
 66.2

 New condition
 2698
 719.26

801.286

The CofG is now 7192600 ÷ 2696 = 2666mm looks OK. BUT:

The aircraft must be in balance at ZFW as well, so take the fuel out.

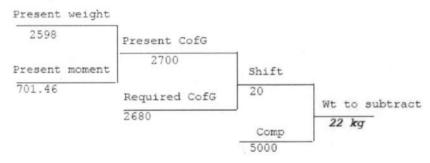
New condition 2698 719.26

Mains -100 1780 -17.8

Now 2598 701.46

CofG is now $7014600 \div 2598 = 2700$ mm. Out of the envelope.

Do a weight to subtract from the rear-



The packets are 20kg each, so you will have to remove 2 packets.

Incorrect

Marks for this submission: 0/2.