Operations with Matrices: Quiz:

Answer the following 20 questions to the best of your ability. Show all work for full credit.

1. 3 6 0 −1 2. [-5 4 -10] – [9 -2 -6]

−1 −3 + 6 0

−5 −1 2 3

3. 1 1 -4 6 4. −5 2 −2 \_ 6 −5 −6

6 -4 + 5 1 1 4 −2 0 1 3 −3

0 0 -4 -1

5. −5 −3 0 6. 5 1

0 5 3 1 -2

6 -4

7. Are the following matrices equal? Why or why not? 0 3 0 3

1 4 1 4

8. [4 2] + [−2 −6] 9. −3 ([0 −2 5] - [2 0 2])

10. −1 5 -3 6 11. 5 4 -1 5

5 −5 -3 0 1 3 0 2

12. −4 ⋅ 3 −6 **.** -2 6 13. -2 \_ 3 -6

1 4 -1 -4 -6 0

14. [1 -2 -3] 2

-1

1

15. A corporation has three factories, each of which manufactures acoustic guitars and electric guitars. The number of units of guitars produced at factory *j* in one day is represented by a*ij* in the matrix.

A = 70 50 25

35 100 70

Find the production levels if production is increased by 20%.

Grading:

Each question carries the same amount of points: 6.5 points

A= 93-100

B= 86-92

C= 78=85

D= 70-77

F= 69 and below

Answers:

1. 3 5

5 -3

-3 2

1. [-14 6 -4]
2. -19 31

11 1

-20 -5

1. -11 7 4

3 -5 3

1. 15 0
2. -25
3. 15 3

3 -6

18 -12

1. Yes the matrices are equal, because every element is the same and is in the same place.
2. [2 -4]
3. [6 6 -9]
4. -12 -6
5. -30
6. -5 32

-1 11

1. -48 -24

24 40

1. 16

6

1. [1]
2. 84 60 30

42 120 84