mAs Reciprocity Worksheet

1. A radiograph is performed using 300 mA and 0.05 seconds. The technologist changes the mA to 500 mA while maintaining the same receptor exposure. What new exposure time is required?

2. An exposure is made using 400 mA and 25 milliseconds. The technologist changes to 200 mA to reduce motion blur. What new exposure time (in seconds) is required to maintain exposure?

3. A radiograph was taken using 250 mA and 0.12 seconds. The technologist increases the mA to 600 mA. What new exposure time is required?

4. An image is performed at 500 mA and 10 milliseconds. The technologist changes the mA to 250 mA. What exposure time (in seconds) is required?

5. A spine exam is completed using 200 mA and 0.3 seconds. The technologist increases the mA to 400 mA. What new exposure time is required?

6. A portable exam is performed at 100 mA and 50 milliseconds. The technologist changes the mA to 300 mA. What new exposure time (in seconds) is required?

7. An abdomen is imaged using 600 mA and 0.08 seconds. The technologist decreases the mA to 300 mA. What exposure time maintains receptor exposure?

8. An exposure is performed at 350 mA and 0.2 seconds. The technologist changes the mA to 700 mA. What new exposure time is required?

9. A radiograph is taken at 400 mA and 15 milliseconds. The technologist changes to 800 mA. What new exposure time (in seconds) is required?

10. An exam is performed using 250 mA and 0.4 seconds. The technologist increases the mA to 500 mA. What new exposure time is required?

11. An exposure is made using 500 mA and 0.06 seconds. The technologist decreases the mA to 250 mA. What new exposure time is required?

12. A radiograph is performed using 300 mA and 40 milliseconds. The technologist changes to 600 mA. What exposure time (in seconds) is required?

13. An image is completed at 200 mA and 0.5 seconds. The technologist increases the mA to 400 mA. What new exposure time is required?

14. A chest radiograph is taken using 600 mA and 0.02 seconds. The technologist decreases the mA to 300 mA. What exposure time maintains exposure?

15. An exposure is made using 450 mA and 20 milliseconds. The technologist changes to 150 mA. What new exposure time (in seconds) is required?

Answers:

1. 0.03 seconds
2. 0.05 seconds
3. 0.05 seconds
4. 0.02 seconds
5. 0.15 seconds
6. 0.017 seconds
7. 0.16 seconds
8. 0.10 seconds
9. 0.0075 seconds
10. 0.20 seconds
11. 0.12 seconds
12. 0.02 seconds
13. 0.25 seconds
14. 0.04 seconds
15. 0.06 seconds

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