1. It is important for your body to produce millions of new cells because this allows you to grow and replace cells thta have died.

2. A

3. B

4. Before it divides, a cell must make a copy of its deoxyribonucleic acid (DNA).

5. the copying of chromosomes

6. prokaryotic

7. eukaryotic

8. prokaryotic

9. eukaryotic

10. prokaryotic

11. binary fission

12. DNA

13. DNA

14. 46, 8, 48

15. homologous chromosomes

16. Homologous chromosomes have the same sequence of genes and the same structure.

17. organelles, chromosomes

18. chromatids

19. Chromatids are held together at a region called the centromere.

20. mitosis

21. The cell grows and copies its organelles and chromosomes. The chromosomes split into copies called chromatids.The chromatids twist into an X shape.

22. During the second stage of the cell cycle, the chromatids come apart. This separation is called mitosis.

23. During the third stage of the cell cycle, the cell divides into two cells that are identical to each other and to the original cell.

24. B

25. Mitosis Phase 3

26. Mitosis Phase 2

27. Interphase

28. Mitosis Phase 4

29. Mitosis Phase 1

30. Cytokinesis

31. In eukaryotic cells that do not have cell walls, the cell membrane pinches inward until it divides the cytoplasm and splits the cell in two.

32. 3

33. 1

34. 2