

## Section 1.11: The Conditional

### Answers

1. If the movie was popular, then it will make a lot of money. (Or: The movie's popularity implies that it will make a lot of money.)
2. If the movie was not popular, then it will not make a lot of money.
3. If the movie did not make a lot of money, then the movie was not popular.
4. If the movie will make a lot of money, then it is popular.
5. The movie was not popular or it made a lot of money.
6. The movie was popular and it did not make a lot of money.
7.  $p \rightarrow q$
8.  $\bar{p} \rightarrow \bar{q}$
9.  $q \rightarrow p$
10.  $\bar{q} \rightarrow \bar{p}$
11.  $q \rightarrow \bar{p}$
12.  $q \rightarrow p$
13.  $\bar{q} \rightarrow \bar{p}$
14.  $\bar{p} \rightarrow \bar{q}$
15.  $p \rightarrow q$
16.  $\bar{p} \vee q$
17.  $\bar{q} \vee p$
18.  $q \vee \bar{p}$
19. a) No b) Maybe c) No d) Maybe
20. a) No b) No c) Maybe d) Maybe

21. a) Maybe b) No c) Yes d) Maybe

22. a) Maybe b) Yes c) Maybe d) No

23. If the rungs are not strunking, then the frattling must be responsive.

24. If the rungs are strunking, then the frattling is non-responsive.

25. If the frattling is responsive, then the rungs must not be strunking.

26. The frattling is responsive or the rungs are strunking.

27. a)

28. b)

29. a)

30. a)

31. b)

32. a)

33. d)

34. a)

35. b)

36. c)