Problem 5

CRIBBAGE HAND SCORE

One aspect of playing Cribbage is to score a "hand" of 4 cards (from a conventional deck of 52 playing cards). In addition to the four cards in the hand, there is also a designated card (from the 48 remaining cards in the deck) which is called the "start" card. The order of card values is Ace, 2, 3, ...10, Jack, Queen, King (from low to high).

The rules for scoring the hand of 4 cards **and** the start card is as follows:

$ MULTIPLES – four cards of the same value is worth 12 points; three of the same is worth 6 points; and a pair is worth 2 points.

$ FIFTEEN (2 points) – groups of cards that add up to 15. Cards have their face value, except an Ace has a value of 1, and a Jack, Queen and King have a value of 10 points each.

$ RUN (3, 4 or 5 points) – series of three or more cards in value order (recall that Ace is low and there is no "wrap around"). One point is scored for each card of the run. If there is a run of 5, those 5 cards cannot also receive points as runs of 3 or 4. If there is a run of 4, those 4 cards cannot also receive points as runs of 3. Cards do not have to be of the same suit (Note: if one of the hands contains two of the same value, different runs can be counted i.e. a hand with two 5's, a 6 and a 7, can be scored as two runs of three)

$ FLUSH (4 or 5 points) – four or five cards in the same suit. One point is scored for each card of the flush. A flush of 4 cards is only allowed if the four cards are the four cards from the hand, and the non-flushed card is the start card.

$ JACK AT THE START (1 point) – if a hand holds the Jack that is the same suit as the start card.

The highest possible hand is J, 5, 5, 5 with the start card being a 5 of the same suit as the J in the hand. There are 4 fifteens by combining the Jack with a five (8 points), 4 more by combinations of three fives (8 points) for a total of 16 points for fifteens; 12 points for the four multiples of 5's; and 1 more point for the J of the same suit as the start card - for a total maximum points of 29.

The input file (DATA5) will contain five lines of data. Each line of data will contain five cards: the four cards in the hand followed by the start card. Each card will be a two character string. The first character is the card value (A, 2, 3, 4, 5, 6, 7, 8, 9, 0, J, Q, K), and the second character is the suit (C, D, H, S). A single space separates each of the cards.

The output file (OUT5) will contain five lines of data corresponding to each of the input lines. Each line will contain the value of the hand, left justified on the line.

Sample Input (Three lines only)

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6H 6D 9D 6C 0S
JS 5D JC 5C KS
3S 4S 6S 5S 2S
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Sample Output

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12
17
14
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