```
entry:
                                                                    %retval = alloca i32, align 4
                                                                    %A = alloca [10 x i32], align 16
                                                                    %B = alloca [10 \times i32], align 16
                                                                    \%i = alloca i32, align 4
                                                                    \%j = alloca i32, align 4
                                                                    %k = alloca i32, align 4
                                                                    store i32 0, i32* %retval, align 4
                                                                    \%0 = \text{bitcast} [10 \times i32] * \% A \text{ to } i8 *
                                                                    call void @llvm.memcpy.p0i8.p0i8.i64(i8* align 16 %0, i8* align 16 bitcast
                                                                    ... ([10 x i32]* @ const.main.A to i8*), i64 40, i1 false)
                                                                    %1 = bitcast [10 x i32] * %B to i8 *
                                                                    call void @llvm.memset.p0i8.i64(i8* align 16 %1, i8 0, i64 40, i1 false)
                                                                    store i32 37, i32* %k, align 4
                                                                    store i32 0, i32* %j, align 4
                                                                    store i32 0, i32* %i, align 4
                                                                    %2 = load i32, i32* %j, align 4
                                                                    %var = alloca i32, align 16
                                                                    store i32 %2, i32* %var, align 4
                                                                    %3 = load i32, i32* %k, align 4
                                                                    %var1 = alloca i32, align 16
                                                                    store i32 %3, i32* %var1, align 4
                                                                    br label %for.cond
                                                                               for.cond:
                                                                               %4 = load i32, i32* %i, align 4
                                                                               %cmp = icmp slt i32 %4, 10
                                                                               br i1 %cmp, label %for.body, label %for.end, !prof!34
                        for.body:
                        %fix2 = load i32, i32* %var1, align 4
                         %mul = mul nsw i32 %fix2, 2
                        \%fix = load i32, i32* \%var, align 4
                         %idxprom = sext i32 %fix to i64
                        %arrayidx = getelementptr inbounds [10 x i32], [10 x i32]* %A, i64 0, i64
                        ... %idxprom
                        %5 = load i32, i32* %arrayidx, align 4
                         %mul1 = mul nsw i32 %5, 23
                        %add = add nsw i32 %mul, %mul1
                        %6 = load i32, i32* %i, align 4
                                                                                                                      for.end:
                        %add2 = add nsw i32 %add, %6
                                                                                                                      ret i32 0
                        %7 = load i32, i32* %i, align 4
                        %idxprom3 = sext i32 %7 to i64
                        % \operatorname{arrayidx} 4 = \operatorname{getelementptr} in \text{bounds} [10 \times i32], [10 \times i32] * \%B, i64 0, i64
                        ... %idxprom3
                        store i32 %add2, i32* %arrayidx4, align 4
                        \%8 = \text{load i}32, i32*\%i, align 4
                         %rem = srem i32 \%8, 7
                        %cmp5 = icmp eq i32 %rem, 0
                        br i1 %cmp5, label %if.then, label %if.end10, !prof!35
                                                                                    F
               if.then:
               %9 = load i32, i32* %i, align 4
               %rem6 = srem i32 \%9.2
               %cmp7 = icmp eq i32 %rem6, 1
               br i1 %cmp7, label %if.then8, label %if.else, !prof!36
                                                          F
                                        if.else:
                                        %11 = load i32, i32* %i, align 4
%10 = load i32, i32* \%i, align 4
                                         %add9 = add \text{ nsw } i32 \%11.1
store i32 %10, i32* %var, align 4
                                        store i32 %add9, i32* %var1, align 4
                                         br label %if.end
                                                  if.end:
                                                  br label %if.end10
                       if.end10:
                       %12 = load i32, i32* \%i, align 4
                       %idxprom11 = sext i32 %12 to i64
                       % \operatorname{arrayidx} 12 = \operatorname{getelementptr} in bounds [10 x i32], [10 x i32] * %B, i64 0, i64
                       ... %idxprom11
                       %13 = load i32, i32* %arrayidx12, align 4
                       %call = call i32 (i8*, ...) @printf(i8* noundef getelementptr inbounds ([4 x
                       ... i8], [4 x i8]* @.str, i64 0, i64 0), i32 noundef %13)
                       br label %for.inc
                                                                     for.inc:
                                                                     %14 = load i32, i32* %i, align 4
                                                                     %inc = add nsw i32 %14, 1
                                                                     store i32 %inc, i32* %i, align 4
                                                                     br label %for.cond, !llvm.loop !37
```

CFG for 'main' function

if.then8:

br label %if.end