(a)

Original
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  public int methodId_0(int param) {
    if (fieldId_0 <= param)
      return ~fieldId_0;
    return fieldId_0;
  }
}
```

LOI
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  public int methodId_0(int param) {
    if (fieldId_0 <= param)
      return ~~fieldId_0;
    return fieldId_0;
  }
}
```

LOD
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  public int methodId_0(int param) {
    if (fieldId_0 <= param)
      return fieldId_0;
    return fieldId_0;
  }
}
```

(b)

Original
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_1 >= param)
      return fieldId_1 / fieldId_0;
    return param;
  }
}
```

ODL
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_1 >= param)
      return fieldId_0;
    return param;
  }
}
```

VDL
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_1 >= param)
      return fieldId_0;
    return param;
  }
}
```

(c)

Original
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_1 >= param)
      return fieldId_1 / fieldId_0;
    return param;
  }
}
```

ROR
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (false)
      return fieldId_1 / fieldId_0;
    return param;
  }
}
```

SDL
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    //if (fieldId_1 >= param)
    //   return fieldId_1 / fieldId_0;
    return param;
  }
}
```

(d)

Original
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_1 >= param)
      return fieldId_1 / fieldId_0;
    return param;
  }
}
```

SDL
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_1 >= param)
      // return fieldId_1 / fieldId_0;
    return param;
  }
}
```

SDL
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    //if (fieldId_1 >= param)
    //   return fieldId_1 / fieldId_0;
    return param;
  }
}
```

(e)

Original
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 0;

  public int methodId_0() {
    return fieldId_0 + 1;
  }
}
```

AOR
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 0;

  public int methodId_0() {
    return fieldId_0 * 1;
  }
}
```

LVR
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 0;

  public int methodId_0() {
    return fieldId_0 + 0;
  }
}
```

(f)

Original
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_0 >= param)
      fieldId_0 = fieldId_0 + 1;
    return fieldId_0;
  }
}
```

InlineConstant
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (fieldId_0 >= param)
      fieldId_0 = fieldId_0 + 0;
    return fieldId_0;
  }
}
```

RemoveConditionals
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  protected int fieldId_0 = 2;
  protected int fieldId_1 = -2;

  public int methodId_0(int param) {
    if (false)
      fieldId_0 = fieldId_0 + 1;
    return fieldId_0;
  }
}
```

(g)

Original
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  private long fieldId_0 = 2;

  public long methodId_0(long param) {
    if (fieldId_1 >= fieldId_0)
      return fieldId_1 * fieldId_0;
    return fieldId_0;
  }

  public long methodId_1(long param) {
    return new ClassId_1().fieldId_1;
  }
}
```

PNC
```
package Package_0;
public class ClassId_0 extends ClassId_1 {
  private long fieldId_0 = 2;

  public long methodId_0(long param) {
    if (fieldId_1 >= fieldId_0)
      return fieldId_1 * fieldId_0;
    return fieldId_0;
  }

  public long methodId_1(long param) {
    return new ClassId_0().fieldId_1;
  }
}
```