Tracking why operators are not covered

[ONNX backend test script](#) reports the coverage on the operators and attributes. But we have various of reasons for the missing test coverage on operators. This doc keeps tracking why operators are not covered by the testcases.

- 💚 The ONNX operator can map to a Caffe2 operator.
- 💛 The solution is not perfect/finished, for example, the operator can map to a combination of Caffe2 operators.
- ❤️ Hard to find a solution with existing Caffe2 operators.

Operator	Test Coverage	PyTorch	Caffe2
Abs	Yes	OK	💚OK
Acos	Yes	OK	💚OK
Add	Yes	OK	💚OK
And	Yes	Support int tensor, but no bool tensor	💚OK
ArgMax			💚OK
ArgMin			💚OK
Asin			💚OK
Atan			💚OK
AveragePool		OK	💚OK
BatchNormalization		OK	💚OK
Cast	Yes		❤️Need extendtion
Ceil	Yes		💚OK
Clip	Yes	OK	💚OK
Concat	Yes	OK	💚OK
Constant	Yes	OK	💛Special handling
Conv	Yes	OK	💚OK
ConvTranspose	Yes		💚OK, under enhancement
Cos	Yes	OK	💚OK
DepthToSpace	Yes		❤️No op
Div	Yes	OK	💚OK
Dropout	Yes	OK	💚OK
Elu	Yes	OK	💚OK

Equal	Yes	OK	💚OK
Exp	Yes	OK	💚OK
Flatten	Yes	OK	💚OK
Floor	Yes		💚OK
GRU			💚
Gather	Yes	OK	💛C2 only support axis=0 or 1, under development
Gemm	Yes	OK	💛C2 use FC or MatMul + Add
GlobalAveragePool	Yes	No direct mapping	💚OK
GlobalLpPool			💔No mapping yet
GlobalMaxPool			💚OK
Greater	Yes		💚OK
HardSigmoid	Yes		💔No op
Hardmax	Yes		💔No op
InstanceNormalization			💚OK
LRN		OK	💚OK
LSTM			💚OK
LeakyRelu	Yes	OK	💚OK
Less	Yes		💚OK
Log	Yes	OK	💚OK
LogSoftmax		OK	💚No op, translated in onnx-caffe2
LpNormalization			💔ONNX and C2 have different definition
LpPool			💚Should be LpPool, no tests
MatMul	Yes	OK	💚OK
Max	Yes	OK	💚OK
MaxPool		OK	💚OK
MaxRoiPool			💔No mapping yet
Mean			💚OK, need broadcasting support
Min	Yes	OK	💚OK, need broadcasting support
Mul	Yes	OK	💚OK, need broadcasting support
Multinomial	Yes	OK	💔no op

Neg	Yes	OK	💚OK
Not	Yes		💚OK
Or	Yes		💚OK
PRelu	Yes	OK	💛Need to enhance C2 implementation
Pad	Yes	OK	💚OK
Pow	Yes	OK	💚OK
RNN			💚OK
RandomNormal			💔No op
RandomNormalLike			💔No op
RandomUniform			💔No op
RandomUniformLike			💔No op
Reciprocal	Yes		💚Use Pow to implement
ReduceL1			💔No op
ReduceL2			💔No op
ReduceLogSum			💔No op
ReduceLogSumExp			💔No op
ReduceMax			💚OK
ReduceMean			💚OK
ReduceMin			💚OK
ReduceProd			💚OK
ReduceSum			💚OK
ReduceSumSquare			💔No op
Relu	Yes	OK	💚OK
Reshape	Yes	OK	💚OK
Selu	Yes	OK	💚OK
Sigmoid	Yes	OK	💚OK
Sin	Yes	OK	💚OK
Size	Yes	OK	💚OK
Slice	Yes	OK	💔ScatterAssign + Cast, very hacky implementation, Slice in C2 only supports one dimension

Softmax	Yes	OK	♥Axis and dim has different semantics
Softplus	Yes	OK	♥OK
Softsign	Yes		♥OK
SpaceToDepth			♥No op
Split	Yes	OK	♥OK
Sqrt	Yes		♥OK
Squeeze	Yes		♥OK
Sub	Yes	OK	♥OK
Sum	Yes	OK	♥OK, need broadcasting support
Tanh	Yes	OK	♥OK
Tile		OK	♥OK, need some enhance
TopK		OK	♥OK
Transpose	Yes	OK	♥OK
Upsample			♥No bilinear
Xor	Yes		♥OK
experimental ATen			♥OK
experimental Affine			♥No op
experimental ConstantFill			♥OK
experimental Crop			♥No op
experimental FC			♥OK
experimental GRUUnit			♥OK, no tests
experimental GivenTensorFill			♥OK
experimental Identity			♥OK
experimental ImageScaler			♥No op
experimental MeanVarianceNormalization			♥No op
experimental ParametricSoftplus			♥No op
experimental Scale			♥OK
experimental ScaledTanh			♥No op
experimental	Yes		♥OK

ThresholdedRelu			