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Format["Core32"] = {"Binary8p3se", "Binary8p4se"}
Format["Core64"] = {"Binary4p1sf", "Binary4p2sf", "Binary8p3se", "Binary8p4se"}

IEEE754_format["Core32"] = ["binary32"]
ConvertToIEEE754(fx,  $\phi$ ,  $\rho$ )
> ConvertToIEEE754(Binary8p3se, binary32,  $\rho$ )
> ConvertToIEEE754(Binary8p4se, binary32,  $\rho$ )
 $\rho$  in [
  (NearestTiesToEven, SatPropagate),
  (StochasticB(Minimum(Precision(fx), 16)), SatPropagate),
]
* ConvertToIEEE754{fx=Binary8p3se,  $\phi$ =binary32,  $\rho$ =(NearestTiesToEven, SatPropagate)}
* ConvertToIEEE754{Binary8p3se, binary32, (NearestTiesToEven, SatPropagate)}

* ConvertToIEEE754(f=Binary8p3se,  $\phi$ =binary32,  $\rho$ =(NearestTiesToEven, SatPropagate))
* ConvertToIEEE754(f=Binary8p3se,  $\phi$ =binary32,  $\rho$ =(StochasticB(3), SatPropagate))
* ConvertToIEEE754(f=Binary8p4se,  $\phi$ =binary32,  $\rho$ =(NearestTiesToEven, SatPropagate))
* ConvertToIEEE754(f=Binary8p4se,  $\phi$ =binary32,  $\rho$ =(StochasticB(4), SatPropagate))

ConvertFromIEEE754(fx,  $\phi$ ,  $\rho$ )
> ConvertFromIEEE754(binary32, Binary8p3se,  $\rho$ )
> ConvertFromIEEE754(binary32, Binary8p4se,  $\rho$ )
 $\rho$  in [
  (NearestTiesToEven, SatPropagate),
  (StochasticB(Minimum(Precision(fx), 16)), SatPropagate),
]
* ConvertFromIEEE754( $\phi$ =binary32, f=Binary8p3se,  $\rho$ =(NearestTiesToEven, SatPropagate))
* ConvertFromIEEE754( $\phi$ =binary32, f=Binary8p3se,  $\rho$ =(StochasticB(3), SatPropagate))
* ConvertFromIEEE754( $\phi$ =binary32, f=Binary8p4se,  $\rho$ =(NearestTiesToEven, SatPropagate))
* ConvertFromIEEE754( $\phi$ =binary32, f=Binary8p3se,  $\rho$ =(StochasticB(4), SatPropagate))

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Constraints["Core32"] = [
  [ Add(fx, fy, fr, ρ) = [
    "( fx == fy )",
    "( BitwidthOf(fr) >= BitwidthOf(fx) )",
    "( PrecisionOf(fr) >= PrecisionOf(fx) )"
  ]
], [
  [ SqrtFast(fx, fr, ρ) = [
    "( fx in {Binary8p3se} )",
    "( fr in {Binary8p3se, Binary8p4se} )"
  ]
]
]

Add(fx, fy, fr, ρ)
available formats: [Binary8p3se, Binary8p4se]
constraints:
- "( BitwidthOf(fr) >= BitwidthOf(fx) )"
- fr in {Binary8p3se, Binary8p4se}
- fx in {Binary8p3se, Binary8p4se}
- PrecisionOf(fr) >= PrecisionOf(fx)"
- fr in {Binary8p4se}, fx in {Binary8p3se, Binary8p4se}
- fr in {Binary8p3se}, fx in {Binary8p3se}
- fx == fy
> Add(Binary8p3se, Binary8p3se, Binary8p3se, ρ)
> Add(Binary8p3se, Binary8p3se, Binary8p4se, ρ)
> Add(Binary8p4se, Binary8p4se, Binary8p4se, ρ)
- ρ in { (ToNearestTiesToEven, OvfInf), (ToNearestTiesToEven, SatFinite) }
* Add(Binary8p3se, Binary8p3se, Binary8p3se, (ToNearestTiesToEven, OvfInf))
* Add(Binary8p3se, Binary8p3se, Binary8p4se, (ToNearestTiesToEven, OvfInf))
* Add(Binary8p4se, Binary8p4se, Binary8p4se, (ToNearestTiesToEven, OvfInf))
* Add(Binary8p3se, Binary8p3se, Binary8p3se, (ToNearestTiesToEven, SatFinite))
* Add(Binary8p3se, Binary8p3se, Binary8p4se, (ToNearestTiesToEven, SatFinite))
* Add(Binary8p4se, Binary8p4se, Binary8p4se, (ToNearestTiesToEven, SatFinite))

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SqrtFast(fx, fr, ρ)
available formats: [Binary8p3se, Binary8p4se]
constraints:
- fr in {Binary8p3se, Binary8p4se}
- fx in {Binary8p4se, Binary8p4se}
- PrecisionOf(fr) >= PrecisionOf(fx)
> SqrtFast(Binary8p3se, Binary8p3se, ρ)
> SqrtFast(Binary8p3se, Binary8p4se, ρ)
> SqrtFast(Binary8p4se, Binary8p4se, ρ)
- ρ in { (ToNearestTiesToEven, SatFinite), (TowardZero, SatFinite) }
* SqrtFast(Binary8p3se, Binary8p3se, (ToNearestTiesToEven, SatFinite))
* SqrtFast(Binary8p3se, Binary8p4se, (ToNearestTiesToEven, SatFinite))
* SqrtFast(Binary8p4se, Binary8p4se, (ToNearestTiesToEven, SatFinite))
* SqrtFast(Binary8p3se, Binary8p3se, (TowardZero, SatFinite))
* SqrtFast(Binary8p3se, Binary8p4se, (TowardZero, SatFinite))
* SqrtFast(Binary8p4se, Binary8p4se, (TowardZero, SatFinite))

all ρ
[ (ToNearestTiesToEven, OvfInf), (ToNearestTiesToEven, SatFinite), (TowardZero, SatFinite) ]

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Signatures for "Core32":

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<Add(x::fx, y::fy, r::fr, ρ)>
Add(x::Binary8p3se, y::Binary8p3se, r::Binary8p3se, ρ=(ToNearestTiesToEven, OvfInf))
Add(x::Binary8p3se, y::Binary8p3se, r::Binary8p4se, ρ=(ToNearestTiesToEven, OvfInf))
Add(x::Binary8p4se, y::Binary8p4se, r::Binary8p4se, ρ=(ToNearestTiesToEven, OvfInf))
Add(x::Binary8p3se, y::Binary8p3se, r::Binary8p3se, ρ=(ToNearestTiesToEven, SatFinite))
Add(x::Binary8p3se, y::Binary8p3se, r::Binary8p4se, ρ=(ToNearestTiesToEven, SatFinite))
Add(x::Binary8p4se, y::Binary8p4se, r::Binary8p4se, ρ=(ToNearestTiesToEven, SatFinite))

<.SqrtFast(x::fx, r::fr, ρ)>
.SqrtFast(x::Binary8p3se, r::Binary8p3se, ρ=(ToNearestTiesToEven, SatFinite))
.SqrtFast(x::Binary8p3se, r::Binary8p4se, ρ=(ToNearestTiesToEven, SatFinite))
.SqrtFast(x::Binary8p4se, r::Binary8p4se, ρ=(ToNearestTiesToEven, SatFinite))
.SqrtFast(x::Binary8p3se, r::Binary8p3se, ρ=(TowardZero, SatFinite))
.SqrtFast(x::Binary8p3se, r::Binary8p4se, ρ=(TowardZero, SatFinite))
.SqrtFast(x::Binary8p4se, r::Binary8p4se, ρ=(TowardZero, SatFinite))

<ConvertToIEEE754(x::f, r, ρ)>
ConvertToIEEE754(x::Binary8p3se, r=binary32, ρ=(NearestTiesToEven, SatPropagate))
ConvertToIEEE754(x::Binary8p3se, r=binary32, ρ=(StochasticB(3), SatPropagate))
ConvertToIEEE754(x::Binary8p4se, r=binary32, ρ=(NearestTiesToEven, SatPropagate))
ConvertToIEEE754(x::Binary8p4se, r=binary32, ρ=(StochasticB(4), SatPropagate))

<ConvertFromIEEE754(x::f754, r, ρ)>
ConvertFromIEEE754(x::binary32, r=Binary8p3se, ρ=(NearestTiesToEven, SatPropagate))
ConvertFromIEEE754(x::binary32, r=Binary8p3se, ρ=(StochasticB(3), SatPropagate))
ConvertFromIEEE754(x::binary32, r=Binary8p4se, ρ=(NearestTiesToEven, SatPropagate))
ConvertFromIEEE754(x::binary32, r=Binary8p4se, ρ=(StochasticB(4), SatPropagate))

<Convert(x::f, r, ρ)>
Convert(x::Binary8p3se, r=Binary8p4se, ρ=(NearestTiesToEven, SatPropagate))
Convert(x::Binary8p4se, r=Binary8p3se, ρ=(NearestTiesToEven, SatPropagate))
Convert(x::Binary8p3se, r=Binary8p4se, ρ=(StochasticB(3), SatPropagate))
Convert(x::Binary8p4se, r=Binary8p3se, ρ=(StochasticB(4), SatPropagate))
```