★ ★

DPI -   Dots   per   inch
            (Pixels)

Formula:

$$DPI = \frac{\sqrt{(Horizontal \ Pixel)^2 + (Vertical \ Pixel)^2}}{screen \ size \ (in)}$$

MDPI	HDPI	XHDPI	XXHDPI	XXXHDI
160 dpi	240 dpi	320 dpi	480 dpi	640 dpi
1 dp = 1 px	1dp = 1.5x1px	1dp = 2x1px	1dp = 3x1px	1dp = 4 x1px

Scale Factor = $\frac{dpi}{160}$ $dp = \frac{screen \ pixel}{Scale \ factor}$

Samsung   Note 9

6.4 in ,   1440 × 2960   larger than XXHPI (480)
                                so,

$$dpi = \frac{\sqrt{(1440)^2 + (2960)^2}}{6.4} = \boxed{514} \ dpi \quad \boxed{XXX \ HDPI}$$

1 dp = 4 px   Scale Factor = $\frac{514}{160}$ = 4 (int)

1 px = ¼ dp

$$dp = \frac{1440}{4} \ , \ \frac{2960}{4}$$ $\boxed{360 × 740 \ dp}$

$$= 360 \quad × \quad 740 \quad dp$$

★ ★

BlackBerry Key2

4.5 in , 1080 × 1620

$$dpi = \frac{\sqrt{(1080)^2 + (1620)^2}}{4.5} = \boxed{433}_{dpi} \quad \boxed{XXHDPI}$$

$$\text{Scale Factor} = \frac{433}{160} = 3 \ (int)$$

$$dp = \frac{1080}{3} , \frac{1620}{3}$$

$$= \boxed{360 \times 540 \ dp}$$

BlackBerry ~~KeyOne~~ Passport

4.5 , 1440 × 1440

$$dpi = \frac{\sqrt{(1440)^2 + (1440)^2}}{4-5} = \boxed{453}_{dp} \quad \boxed{XXHDPI}$$

$$\text{Scale Factor} = \frac{453}{160} = 3 \quad int$$

$$dp = \frac{1440}{3} , \frac{1440}{3} = \boxed{480 \times 480 \ dp}$$

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Samsung Galaxy S7

$$5.1 \text{ in} \quad , \quad 1440 \times 2560$$

$$dpi = \frac{\sqrt{(1440)^2 + (2560)^2}}{5.1} = \boxed{577}_{dpi} \quad \underline{XXXHDPI}$$

$$S.f = \frac{577}{160} = 4 \quad (int)$$

$$dp = \frac{1440}{4} \quad , \quad \frac{2560}{4} = \boxed{360 \times 640 \quad dp}$$

IPhone 7

$$4.7 \text{ in} , \quad 750 \times 1334$$

$$dpi = \frac{\sqrt{(750)^2 + (1334)^2}}{4.7} = \boxed{326}_{dpi} \quad \underline{XXHDPI}$$

$$S.F = \frac{326}{160} = 2.0$$

$$dp \quad \frac{750}{2} \quad , \quad \frac{1334}{2} = \boxed{375 \times 667 \quad dp}$$

★ ★

One Plus 5T $\boxed{1^+}$

$$6.0 \quad , \quad 1080 \times 2160 \ pt$$

$$dpi = \frac{\sqrt{(1080)^2 + (2160)^2}}{6} = \boxed{\frac{402}{dpi}} \qquad XxHDPI$$

$$S.F = \frac{402}{160} = 3 \ (int)$$

$$dp = \frac{1080}{3} , \frac{2160}{3} = \boxed{360 \times 720 \ dp}$$

ViVo V11

$$6.4 \quad , \quad 1080 \times 2340$$

$$dpi = \frac{\sqrt{(1080)^2 + (2340)^2}}{6.4} = \boxed{\frac{403}{dpi}} \cdot XXHDPI$$

$$S.F = \frac{403}{160} = 3 \ (int)$$

$$dp = \frac{1080}{3} , \frac{2340}{3} = \boxed{360 \times 780 \ dp}$$

★ ★

Iphone 6

4.7 , 750 x 1334

$$dpi = \frac{\sqrt{(750)^2 + (1334)^2}}{4.7} = \boxed{\frac{326}{dpi}} \quad XXHDPI$$

$$S.F = \frac{326}{160} = 2$$

$$dp = \frac{750}{2} \quad , \quad \frac{1334}{2} = \boxed{375 \times 667 \ dp}$$

Nokia 6·1

5.8 , 1080 x 2280

$$dpi = \frac{\sqrt{(1080)^2 + (2280)^2}}{5.8} = \boxed{\frac{435}{dpi}} \quad XXHDPI$$

$$S.F = \frac{435}{160} = 3 \quad (integral)$$

$$dp = \frac{1080}{3} \quad , \quad \frac{2280}{3} = \boxed{360 \times 760 \ dp}$$

★ ★

Smaller Devices

iPhone 3GS

$$3.5 \quad , \quad 320 \times 480$$

$$dpi = \frac{\sqrt{(320)^2 + (480)^2}}{3.5} \qquad = \boxed{165} \quad dpi \qquad \underline{\text{MDPI MATRE?}}$$

$$\text{Scale Factor} = 1$$

$$dp = \boxed{320 \times 480 \quad dp}$$

Q Mobile Noir E3

$$5.5 \quad , \quad 720 \times 1280$$

$$dpi = \frac{\sqrt{(720)^2 + (1280)^2}}{5.5} \qquad = \boxed{267} \quad \underline{\text{XHDPI}} \quad dpi$$

$$S.F = \frac{267}{160} = 2 \, (int)$$

$$dp = \frac{720}{2} \, , \, \frac{1280}{2} = \boxed{360 \times 640 \quad dp}$$