

H.C.F. and L.C.M.

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1) The H.C.F. of $\frac{9}{4}$, $\frac{3}{20}$, $\frac{9}{10}$ and $\frac{15}{16}$ is:

A) $\frac{3}{80}$ B) $\frac{3}{2}$ C) $\frac{1}{40}$ D) $\frac{45}{2}$

2) The L.C.M. of $\frac{2}{3}$, $\frac{3}{20}$, $\frac{9}{10}$ and $\frac{15}{16}$ is:

A) $\frac{3}{80}$ B) $\frac{3}{2}$ C) $\frac{1}{15}$ D) $\frac{45}{2}$

3) The H.C.F. of 1.26, 1.155, 0.21 and 0.315 is:

A) 0.05 B) 0.105 C) 1.05 D) 0.03 E) 0.035 F) 0.005

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4) The L.C.M. of 1.26, 1.155 and 0.21 is:

A) 0.132 B) 0.01386 C) 13.86 D) 1.386

5) The H.C.F. of $\frac{12}{35}$ and 4 is:

A) 3 B) $\frac{12}{35}$ C) $\frac{35}{3}$ D) $\frac{4}{35}$

6) Let a and b are two positive numbers such that $a-b=9$ and the H.C.F. and L.C.M. of the numbers are 3 and 120 respectively, then $\frac{a}{b}$ is equal to:

A) $\frac{40}{9}$ B) $\frac{8}{5}$ C) 20 D) 4

Note: - *H.C.F.* means *Highest Common Factor* or *Greatest Common Divisor* (g.c.d.) and *L.C.M.* means *Least Common Multiple*.

Answers and explanations:

1) A) $\frac{3}{80}$.

Explanation:-

H.C.F. of fraction = H.C.F. of numerators / L.C.M. of denominators.

2) D) $\frac{45}{2}$.

Explanation:-

L.C.M. of fractions = L.C.M. of numerators / H.C.F. of denominators.

3) B) 0.105.

Explanation:-

Given numbers are 1.26, 1.155, 0.21 and 0.315.

H.C.F. of 1260, 1155, 210 and 315 is 105.

Hence H.C.F. 1.26, 1.155, 0.21 and 0.315 = 0.105.

4) C) 13.86.

Explanation:-

Given numbers are 1.26, 1.155 and 0.21.

L.C.M. of 1260, 1155 and 210 is 13860.

Hence L.C.M. 1.26, 1.155 and 0.21 = 13.86.

5) D) $\frac{4}{35}$.

6) B) $\frac{8}{5}$.

Explanation:-

$a-b=9$, $ab=360$,

$$(a+b)^2=(a-b)^2+4ab$$

$$\Rightarrow (a+b)^2=(9)^2+4 \cdot 360$$

$$\Rightarrow (a+b)^2=81+1440$$

$$\Rightarrow (a+b)^2=1521$$

$$\Rightarrow (a+b)=39$$

Hence $a=24$, $b=15$.

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