

Solutions

2.1 $48=2^4 \times 3$ and $60=2^2 \times 3 \times 5$. The shared smallest powers give $\text{HCF}=2^2 \times 3=12$.

2.2 $8=2^3$ and $12=2^2 \times 3$. The largest prime powers give $\text{LCM}=2^3 \times 3=24$.

2.3 Use denominator 12: $3/4+5/6=9/12+10/12=19/12$.

2.4 False. The HCF divides both numbers; the LCM is a multiple of both. They answer different questions. A decimal estimate is not an exact fraction.

2.5 A A prime number that divides the integer exactly.

3.1 $\text{HCF}=42$, each bag 2 pencils and 3 pens. $\text{LCM}=252$ is a common multiple, useful for matching repeated quantities, not the greatest number of bags dividing both stocks.