What Goes Up Must Come Down-Answers (Or Something Like That)

1. If y varies directly with x, and the constant of variation is $k = 7$, find y when $x = 4$.
   $y = 28$

2. If y varies directly with x, and $y = 15$ when $x = 3$, find y when $x = 4$.
   $y = 20$

3. If y varies directly with x, and $y = 13$ when $x = 39$, find y when $x = 18$.
   $y = 6$

4. If y varies directly with x, and $y = 5$ when $x = 20$, find y when $x = 16$.

   $y = 4$

5. If y varies directly with x, and the constant of variation is $k = 32$, find y when $x = 8$.
   $y = 256$

6. If y varies directly with x, and $y = 21$ when $x = 3$, find y when $x = 1$.
   $y = 7$

7. If y varies jointly as the product of x and z, and $y = 100$ when $x = 10$ and $z = 20$, find y when $x = 4$ and $z = 8$.
   $y = 16$

8. If y varies jointly as the product of x and z, and $y = 14$ when $x = 1$ and $z = 2$, find y when $x = 2$ and $z = 3$.
   $y = 42$

9. If y varies directly with x and inversely with z, and $y = 3$ when $x = 24$ and $z = 4$, find y when $x = 12$ and $z = 3$.
   $y = 2$

10. If y varies directly with x and inversely with z, and $y = 1$ when $x = 1000$ and $z = 10$, find y when $x = 30$ and $z = 1$.
    $y = \frac{3}{10}$.

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