Simplify :

1. $(4x+4)\div 2$; $(9x-3)\div 3$; $(12x-48)\div 12$; $(36x+24)\div 12$.
2. $\frac{1}{3}$ of $(18x-9)$; $\frac{3}{4}$ of $(16x-4)$; $\frac{4}{5}$ of $(20x+15)$.
3. $\frac{1}{2}$ of $(x+3)$ (express the division); $\frac{1}{3}$ of $(x-1)$.
4. $\frac{1}{3}$ of $(3x-1)$; $\frac{3}{4}$ of $(x-3)$; $\frac{2}{3}$ of $(5x-8)$; $\frac{7}{8}$ of $(5x+18)$.

5. If $x=8$, what will $x+2$ equal? Write: $x+2=8+2$; $x+x=8+8$. What is the effect of adding the same or equal quantities to equal quantities? Illustrate by problem.

6. If $x+4=20$, what is the value of x? If $x=16$, what is $x-5$ equal to? What is the effect of subtracting the same or equal quantities from equal quantities? Illustrate by problems.

7. Find the value of x in the equation $3x=24$. Find the value of $6x$. What is the effect of multiplying or dividing equal quantities by the same or equal quantities? Illustrate by problems.

8. If $x=18$ and $y=18$, what can you say of the relative values of x and y? What can you say of two quantities that are each equal to a third quantity? Illustrate by problems.

Find the value of x in each of the following equations :

9. $x-6=12$; $x+8=30$; $x-16=40$; $x+18=80$.
10. $6x=48$; $3x+6=12$; $4x-8=16$; $9x+14=68$.
11. $\frac{x}{3}=12$; $\frac{x}{8}=6$; $\frac{2x}{3}=6$; $\frac{3x}{4}=12$; $\frac{5x}{8}=10$.
12. $\frac{x}{4}+2=8$; $\frac{x}{3}-6=4$; $\frac{3x}{4}+2=8$; $\frac{3x}{2}-3=12$.
13. $\frac{4x}{5}+20=40$; $\frac{5x}{12}-16=44$; $\frac{8x}{20}+18=22$; $\frac{3x}{14}-31=73$.
14. $\frac{2x}{3}-18=10$; $\frac{x}{2}+x=9$; $\frac{3x}{4}+x=7$; $\frac{2x}{3}+\frac{x}{3}=9$.
15. $\frac{x}{2}+\frac{x}{4}=6$; $\frac{x}{3}+\frac{x}{2}=10$; $x-\frac{3x}{4}=12$; $\frac{2x}{3}-\frac{x}{2}=6$.
16. $\frac{3x}{4}-\frac{x}{3}=5$; $\frac{4x}{6}-\frac{x}{3}+2=6$; $\frac{8x}{9}+\frac{2x}{3}-3=1\frac{1}{3}$.