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1. Find the values of the following expressions when $x=3$, $y=-2$, $z=5$

(i) $3x-4y+7z$.

(ii) $xy+yz+zx$.

(iii) $xy^2+yz^2+zx^2$.

2. Divide $3x^4-x^3+1$ by x^2-1.

What value of x would make $3x^4-x^3+1$ exactly divisible by x^2-1 ?

3. (*a*) Change :

(i) x guineas to half-crowns.

(ii) y kilometres to perches.
(8 kilometres = 5 miles.)

(iii) a tons + b cwts. to stones.

(*b*) Express a speed of x miles per hour as feet per second.

4. Factorize each of the following :

(i) mn^2+m^2n+mn.

(ii) $4a^2+10a-6$.

(iii) $xyz-1+z-xy$.

5. Solve the following equations :

(i) $\frac{2}{3}(3x-1) + \frac{3}{2}(3x+1) = 3.$

(ii) $\frac{2}{x-1} + \frac{3}{x+1} = \frac{5}{x}.$

6. Simplify :

(i) $2(4a-3b) - 3(4b-3a) + 2a+b$;

(ii) $x^2+y^2-(x-y)^2$;

(iii) $(685)^2 - (684)^2.$

7. A rectangle is $5x$ yards long and $12x$ feet wide. Write down its area.

The length of a rectangle is increased by 20%, and its width is increased by 25%. Find the percentage increase in its area.

8. If the expressions $2t+9$, $3t+4$, and $4t+5$ represent three whole numbers, find the average of the three numbers in terms of t.

What is the value of t when the second number is 19 ?

What is the value of t if each of the numbers lies between 30 and 50 ?