Review: Solving Equations w/ Variables on Both Sides

State the Property:

1) Addition P.O.E.
2) Division P.O.E.
3) Associative P.O.E.
4) Commutative P.O.M.
5) Multiplication Property of Zero

Solve & check.

1) $3x-2=5x+4$

2) $2(3x-4)=5x+6$

3) $\frac{1}{3}x-4=\frac{1}{2}x+2$

4) $3x-1=3(x-2)$

5) $3+2(2x-3)=4(x+1)-7$

6) $3(5-3x)=3+2(x+6)$

Answers:

1) if $a=b$, then $a+c=b+c$
2) if $a=b$ & $c\neq 0$, then $\frac{a}{c}=\frac{b}{c}$
3) $a+(b+c)=(a+b)+c$
4) $a\cdot b=b\cdot a$
5) $a\cdot 0=0$

1) $x=-3$ 2) $x=14$ 3) $x=-36$ 4) $\emptyset$
5) $\forall \mathbb{R}$ 6) $x=0$