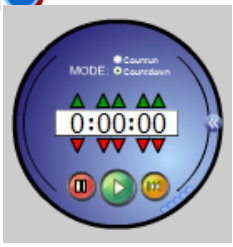
Warm Up Questions



1. $2(x-3)-2(2x-3)=14$

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

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

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

5. **Discount Taxi charges $3.00 as a flat rate and an additional $0.50 per kilometer. Gorman's Taxi charges $1.00 per kilometer. When will the two companies cost the same? When is it best to chose Gorman's/ Discount?**

1 $2(x-3)-2(2x-3)=14$

$2x-6-4x+6=14$

$-2x=14$

$x=-7$

2

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

$$\frac{1}{3}(4x-1)=3x+3 \quad (\times 3,\ \times 3,\ \times 3)$$

$$1(4x-1)=9x+9$$

$$4x-1=9x+9$$

$$4x=9x+9+1$$

$$4x=9x+10$$

$$4x-9x=10$$

$$-5x=10$$

$$x=-2$$

X = #

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

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

$1(4x-2)=\frac{12}{2}(x+1)$

$4x-2=6(x+1)$

$4x-2=6x+6$

$4x=6x+6+2$

$4x=6x+8$

$4x-6x=8$

$-2x=8$

$x=-4$

$X=\#$

4

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

$\frac{2}{3}(2x-1)=\frac{1}{2}(3x+2)+2$ $\times 6$

$\frac{12}{3}(2x-1)=\frac{6}{2}(3x+2)+12$

$4(2x-1)=3(3x+2)+12$

$8x-4=9x+6+12$

$8x-4=9x+18$

$8x=9x+18+4$

$8x=9x+22$

$8x-9x=22$

$-1x=22$

$x=-22$

$x=\#$

5 **Discount Taxi charges $3.00 as a flat rate and an additional $0.50 per kilometer. Gorman's Taxi charges $1.00 per kilometer. When will the two companies cost the same? When is it best to chose Gorman's/ Discount?**

Discount

$3 + 0.50x$

Gorman's

$1.00x$

$$3 + 0.50x = 1.00x$$
$$0.50x = 1.00x - 3$$
$$-1.00x + 0.50x = -3$$
$$-0.50x = -3$$
$$x = 6$$

X=#

Gorman's ⟶ **Less than 6 kilometers**

Discount ⟶ **Greater than 6 kilometers**