Warm-Up

1. In the following inequality, which number would get moved **first** when we solve for x, **7**, **1** or **15**? What **operation** would you use to move it?

$$7x + 1 > 15$$

subtraction

2. Solve the following inequality:

$$2(x + 3) < 8$$

$2x + 6 < 8$

$-6 \quad -6$

$2x < 2$

$\frac{2x}{2} < \frac{2}{2}$

$x < 1$

PER 3

3, 4, 6, 8, 9, 10

(3) $\frac{a}{2} + 1 \geq 3$

$-1 \quad -1$

$\frac{a}{2} \geq 4$

$2 \cdot \frac{a}{2} \geq 4 \cdot 2$

$a \geq 8$

(4) $-\frac{t}{5} + 7 > -4$

$-7 \quad -7$

$-\frac{t}{5} > -11$

$-5 \cdot -\frac{t}{5} < -11 \cdot -5$

$t < 55$

(6) $3 - 3f < -9$

$-3 \quad -3$

$-3f < -12$

$\frac{-3f}{-3} > \frac{-12}{-3}$

$f > 4$

(8) $4k + 15 > -2k + 3$

$+2k \quad +2k$

$6k + 15 > 3$

$-15 \quad -15$

$6k > -12$

$\frac{6k}{6} > \frac{-12}{6}$

$k > -2$

(9) $2(-3m - 5) \geq -28$

$-6m - 10 \geq -28$

$+10 \quad +10$

$\frac{-6m}{-6} \geq \frac{-18}{-6}$

$m \leq 3$

(10) $4m - 17 < 6m + 25$

$-4m \quad -4m$

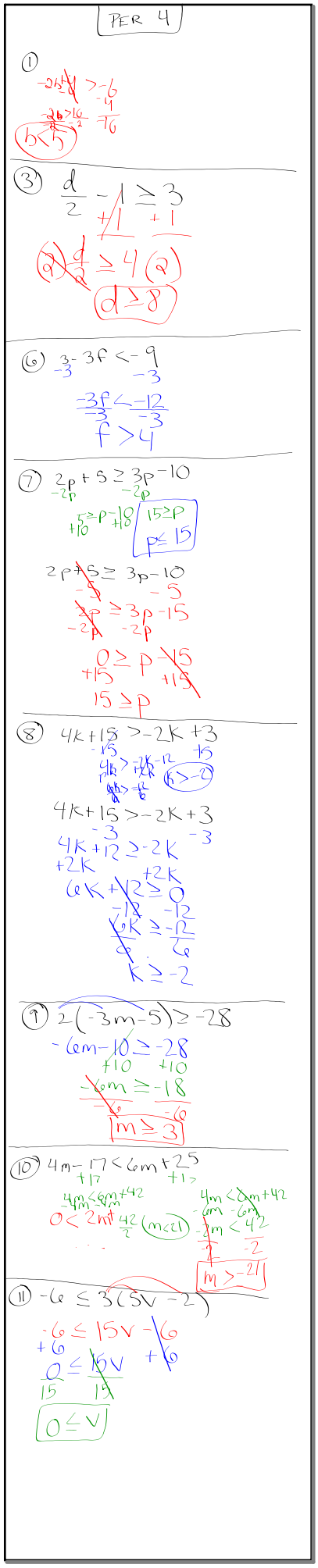
$-17 < 2m + 25$

$-25 \quad -25$

$-42 < 2m$

$\frac{-42}{2} < \frac{2m}{2}$

$-21 < m$ $\quad m > -21$


PER 4
① -2½y > -6
-4 -4
-26 > -16
-2 -2
y < 5
③ d/2 - 1 ≥ 3
+1 +1
(2) d/2 ≥ 4 (2)
d ≥ 8
⑥ 3 - 3f < -9
-3 -3
-3f < -12
-3 -3
f > 4
⑦ 2p + 5 ≥ 3p - 10
-2p -2p
5 ≥ p - 10
+10 +10
15 ≥ p
p ≤ 15
2p + 5 ≥ 3p - 10
-5 -5
2p ≥ 3p - 15
-2p -2p
0 ≥ p - 15
+15 +15
15 ≥ p
⑧ 4k + 15 > -2k + 3
-15 -15
4k > -2k - 12
+2k +2k
6k > -12
6 6
k > -2
4k + 15 > -2k + 3
-3 -3
4k + 12 ≥ -2k
+2k +2k
6k + 12 ≥ 0
-12 -12
6k ≥ -12
6 6
k ≥ -2
⑨ 2(-3m - 5) ≥ -28
-6m - 10 ≥ -28
+10 +10
-6m ≥ -18
-6 -6
m ≤ 3
⑩ 4m - 17 < 6m + 25
+17 +17
4m < 6m + 42
-4m -4m
0 < 2m + 42
-42 -42
-42 < 2m
2 2
-21 < m
m > -21
4m < 6m + 42
-6m -6m
-2m < 42
-2 -2
m > -21
⑪ -6 ≤ 3(5v - 2)
-6 ≤ 15v - 6
+6 +6
0 ≤ 15v
15 15
0 ≤ v

PER 5

(4) $-\frac{t}{5}+7>-4$

$-7 \quad -7$

$\frac{-t}{5}>-11$

$\cdot(-5)$

$t<55$

(5) $-10+3j \geq 5$

$+10 \quad +10$

$3j \geq 15$

$\frac{3j}{3} \geq \frac{15}{3}$

$j \geq 5$

(6) $3-3f<-9$

$-3 \quad -3$

$\frac{-3f}{-3}<\frac{-12}{-3}$

$f>4$

(8) $4k+15>2k+3$

$-2k \quad -2k$

$6k+15>3$

$-15 \quad -15$

$\frac{6k}{6}>\frac{-12}{6}$

$k>-2$

(10) $4m-17<6m+25$

$4m-6m<17+25$

$\frac{-2m}{-2}<\frac{42}{-2}$

$m>-21$

(11) $-6 \leq 3(5v-2)$

$-6 \leq 15v-6$

$+6 \quad +6$

$\frac{0}{15} \leq \frac{15v}{15}$

$0 \leq v$