Announcement:

QUIZ THURSDAY 2/16:
3.1-3.4, 6.1, 6.2

Homework review (6.1 and 6.2):
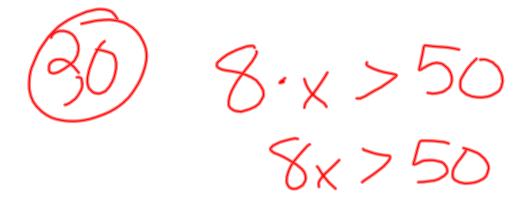
(38) time to beat: $3' \, 41.1''$

3 runners: $153.34''$

$56.38''$

$57.46''$

$\overline{167.18}$

$t = 4^{th}$ runner's time

total $\leq 3' \, 41.1''$

$t + 53.34 + 56.38 + 57.46 \leq 3' \, 41.1''$

$t + 167.18 \leq 3' \, 41.1''$

$t + 167.18 \leq 180 + 41.1''$

$t + 167.18 \leq 221.1$

$-167.18 \qquad -167.18$

$\boxed{t \leq \qquad 53.92}$

$$\textcircled{20} \; -5 \cdot \frac{x}{-5} \le -7.5 \cdot -5$$

$$x \ge 37.5$$

$$\overset{2}{7}.5$$
$$\underline{5}$$
$$37.5$$

(20)

$$8 \cdot x > 50$$

$$8x > 50$$

Solving equations with variables on both sides

$$-7a + 9 = 3a + 49$$

$$-3a \qquad\qquad -3a$$

$$-10a + 9 = 49$$

$$-9 \quad -9$$

$$\frac{-10a}{-10} = \frac{40}{-10}$$

$$\boxed{a = -4}$$

$$\frac{2}{1} \cdot (7 + x) = \frac{21}{12}(4x - 2)$$

$$14 + 2x = 4x - 2$$
$$ -4x \qquad -4x$$

$$14 + {}^-2x = -2$$
$$-14 \phantom{+ {}^-2x =} -14$$

$$\frac{-2x}{-2} = \frac{-16}{-2} \qquad \boxed{x = 8}$$

$$2 \cdot 8$$

$$\boxed{16}$$

$$2 \cdot 3 + 5 \qquad 2 \cdot (3 + 5)$$

$$6 + 5 \qquad\qquad 6 + 10$$

$$11 \qquad\qquad\quad 16 \checkmark$$

Botanical Gardens The membership fee for joining a gardening association is $24 per year. A local botanical garden charges members of the gardening association $3 for admission to the garden. Nonmembers of the association are charged $6. After how many visits to the garden is the total cost for members, including the membership fee, the same as the total cost for nonmembers?

$24 per year
$3 admission for members
$6 admission for non-members

$x = \#$ of visits

$$\$24 + \$3x = \$6x$$
$$ -3x \quad -3x$$
$$\frac{24}{3} = \frac{3x}{3} \qquad \boxed{x = 8}$$

# of visits	cost
1	3
2	6
3	9
4	12
x	3x

$$4z - 15 = 4z + 11$$

$-4z \qquad\qquad -4z$

$-15 = 11 \qquad$ no solution

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

$2x - 6 = 2x - 6$

$-2x \qquad\quad -2x$

$-6 = -6 \quad$ all real numbers

10. $9x - 2 = 8x + 7$

$x = 9$

11. $5n - 3 = 3n + 1$

$n = 2$

12. $4z - 5 = 8z + 3$

$z = -2$

Homework:

p. 157: 5 - 50 (every 5th), 52a
worksheet: 1-8