Linear Word Problem: Answers

1 a) $3n$ b) $n+3$ c) $3-n$ d) $n-3$ e) $\frac{1}{3}n$ f) $3n+8$

g) $\frac{1}{2}n-9$ h) $5(n+8)$ i) $7n+n$ j) $2(5n+8)$

2. Let c be the speed of the car in km/h
Let $8c$ " " " " " plane " "

$$8c - c = 420$$
$$7c = 420$$
$$c = 60$$

∴ the car's speed is 60 km/h and the plane's speed is 480 km/h.

3. Let n, $n+1$ and $n+2$, be 3 consecutive #'s.

$$n + n + 1 + n + 2 = 141$$
$$3n + 3 = 141$$
$$3n = 138$$
$$n = 46$$

∴ the numbers are 46, 47 and 48

4. Let x be the distance Jack ran
Let $x+5$ " " " Jill ran

$$x + x + 5 = 73$$
$$2x + 5 = 73$$
$$2x = 68$$
$$x = 34$$

∴ Jack ran 34 km + Jill ran 39 km

5.

	As Now	Then
Jeanne	$2m$	$2m-3$
Michael	m	$m-3$
Sum		45

Let m be Michael's age in years.
Let $2m$ " Jeanne " " "

$$2m-3+m-3=45$$
$$3m-6=45$$
$$3m=39$$
$$m=13$$

∴ Michael is 13 and Jeanne is 26 now.

6. Let n be the number.

$$\frac{1}{2}n+\frac{2}{3}n=21$$

$$3n+4n=126$$
$$7n=126$$
$$n=18$$

∴ the number is 18.

7. Let m be mark's age.

$3m + m = 20$

$4m = 20$

$m = 5$

∴ Mark is 5.

8. Let n be the number

$\frac{2}{3}n = \frac{3}{8}n + \frac{1}{2}$

$16n = 9n + 84$

$7n = 84$

$n = 12$

∴ the number is 12

9. Let c be the cat's weight in kg

$\frac{5}{2}c + c = 21$

$\frac{7}{2}c = 21$

$7c = 42$

$c = 6$

∴ the cat is 6 kg + the dog is 15 kg

10. Let d be the # of dimes

$25(d+3) + 10d = 250$

$25d + 75 + 10d = 250$

$35d = 175$

$d = 5$

∴ he has 5 dimes + 8 quarters