

Changing the Subject

Level 4 Answers

Green

1) $p + n = 3p$
 $n = 2p$

2) $t + n = 7$
 $n = 7 - t$

3) $3a = 2a + n$
 $a = n$
 $n = a$

4) $p = 2b + n$
 $p - 2b = n$
 $n = p - 2b$

5) $8p = \frac{2}{n}$
 $16p = \frac{2}{n}$
 $16p = n$

6) $7t = \frac{2}{n}$
 $14t = \frac{2}{n}$
 $n = 14t$

7) $a = \frac{5}{3n}$

$5a = 3n$

$\frac{3}{5}a = n$

8) $\frac{4}{3n} = 2b$

$3n = 8b$

$n = \frac{8b}{3}$

9) $e = np$

$\frac{p}{e} = n$

$n = \frac{p}{e}$

10) $5n + 2p = 5p$

$5n = 3p$

$n = \frac{3p}{5}$

Amber

$$1) \quad 3n + p = 9p$$

$$3n = 8p$$

$$n = \frac{8p}{3}$$

$$2) \quad 5n - k = 14k$$

$$5n = 15k$$

$$n = 3k$$

$$3) \quad -5m + 2n = w$$

$$2n = 6w$$

$$n = 3w$$

$$4) \quad 8 = \frac{2p}{n}$$

$$8p = 2n$$

$$4p = n$$

$$5) \quad m + 3n = p$$

$$3n = p - m$$

$$n = \frac{p - m}{3}$$

$$6) \quad 9n - 8g = 0$$

$$9n = 8g$$

$$n = \frac{8g}{9}$$

$$7) \quad 2n + 2a = 8a$$

$$2n = 6a$$

$$n = 3a$$

$$8) \quad 9n + 7t = 25t$$

$$9n = 18t$$

$$n = 2t$$

$$9) \quad \frac{c}{3n} = 2b$$

$$3n = 2bc$$

$$n = \frac{2bc}{3}$$

$$10) \quad a = 2mw$$

$$\frac{a}{2m} = n$$

$$n = \frac{a}{2m}$$

Red

1) $4n - 3a = 2n + 2a$

$2n = 5a$

$n = \frac{5a}{2}$

2) $n^2 = a(b-c)$

$n = \sqrt{a(b-c)}$

3) $n^2 = 7c(a+2b)$

$n = \sqrt{7c(a+2b)}$

4) $\frac{2n}{4r} = t^2$
 $2n = 4rt^2$
 $n = 2rt^2$

5) $n^2 - a = c$
 $n^2 = c+a$
 $n = \sqrt{c+a}$

6) $p^2 - n^2 = 0$
 $n^2 = p^2$
 $n = \pm p$

7) $tn^2 = 4w$

$n^2 = \frac{4w}{t}$

$n = \sqrt{\frac{4w}{t}}$

$n = \pm 2\sqrt{\frac{w}{t}}$

8) $t^2 n^2 = 10$

$n^2 = \frac{10}{t^2}$

$n = \sqrt{\frac{10}{t^2}}$

$n = \pm \sqrt{\frac{10}{t}}$

10) $9(a+b) = 3n$

$3(a+b) = n$

$n = 3(a+b)$

9) $\frac{n^3}{n} = k$
 $n^2 = k$

