

Unit 2 Review

Name: _____
Block: _____

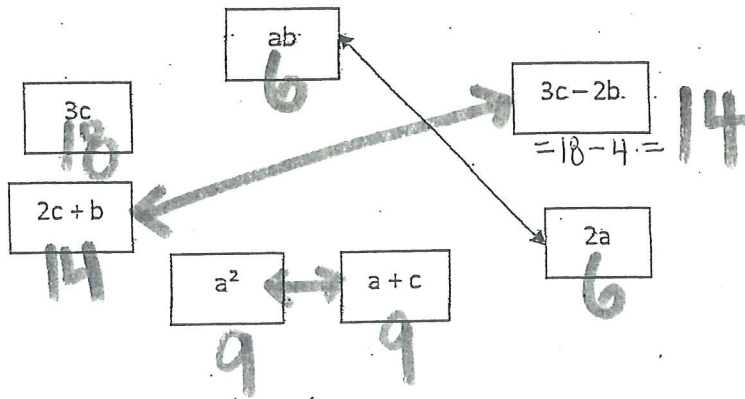
Test Prep

Question 1:

Join pairs of algebraic expressions that have the same value.

When $a = 3$, $b = 2$ and $c = 6$

One pair is joined for you.

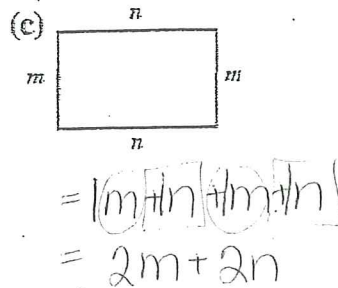
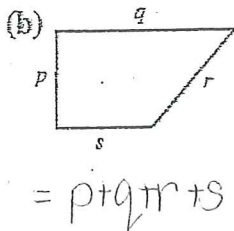
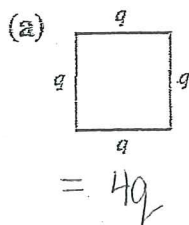


Question 2:

1. For each question name i) the variable ii) the coefficient iii) the constant
- | | | | |
|------------------------|----------------|----------------|----------|
| a) $3x + 2$ | i) x | ii) 3 | iii) 2 |
| b) $7 - 4x$ | i) x | ii) -4 | iii) 7 |
| c) $3x^2 - 5x + 3 + y$ | i) x and y | ii) $3, -5, 1$ | iii) 3 |

Question 3:

Write a formula for the perimeter P of these shapes.



Question 4:

Simplify:

- | | |
|---|--------------------------------------|
| (a) $3a + 3b + 3a + 3b = 6a + 6b$ | (b) $4x + 5y + 2y + 3x = 7x + 7y$ |
| (c) $4t + 5t - 4t + 5t = 10t$ | (d) $2w + 3v + 5w + 2 = 7w + 3v + 2$ |
| (e) $5m + 7n - 5m + n = 8n$ | (f) $10p + 6q - 8q + 2q = 10p$ |
| (g) $5b + 3b + 4b - 6b = 6b$ | (h) $15a + 9 - 9a + 3 = 6a + 12$ |
| (i) $8r + 3t - r + t = 7r + 4t$ | (j) $4a + 4a + 4a + 5a = 17a$ |
| (k) $11p + 5r + 3p - 2 + 3 = 14p + 5r + 1$ | (l) $7b + 3 + 6b + 5 + b = 14b + 8$ |
| (m) $15x - 5y + 3x + 2 + 8y = 18x + 3y + 2$ | (n) $3c + 5c + 6c - 3 + c = 15c - 3$ |

Question 5:

Simplify the following expressions:

a) $2x \times 3t = 6t$

b) $2w \times 4 = 8w$

c) $3t^1 \times t^1 = 3t^2$

d) $5y^1 \times 3y^1 = 15y^2$

e) $3t \times 2q = 6tq$

f) $3x + 4x = 7x$ (w)

g) $5ab^2c \times 6a^2b^2c d$

h) $6rs^2t \times 7rs^3$

$= 30A^4 B^4 C^2 D$

$= 42r^3 s^5 t$

Question 6:

Expand these expressions:

a) $2(3 + m) = 6 + 2m$

b) $4(3d - 2n) = 12d - 8n$

c) $3(g + h) = 3g + 3h$

d) $2k(4 - k) = 8k - 2k^2$

Question 7:

Simplify these expressions:

(a) $3(a + b) + 4(2a + b)$

(b) $5(m + 2n) + 2(3m + 5n)$

(c) $4(2x + 3y) + 2(x - 3y)$

(d) $6r(3r - 2s) + 3(r - 5s)$

(e) $3(x + y) - 4(x + 2y)$

(f) $2(2a - 3b) - 4(3a - 2b)$

(g) $2(3r + 4t) - (2r + 3t)$

(h) $4f(2e + 3f) - 6(e + 2f)$

Question 8:

Write these expressions without brackets:

(a) $(x + 2)(x + 5)$

(b) $(m + 2)(m - 3)$

(c) $(c + 3)(c + 5)$

(d) $(p - 2)(p - 7)$

(e) $(y - 4)(y + 3)$

(f) $(x + 7)(x + 11)$

(g) $(y + 6)^2$

(h) $(x - 8)^2$

Q#7

a) $3a + 3b + 8a + 4b$
 $= 11a + 7b$

e) $3x + 3y - 4x - 8y$
 $= -1x - 5y$

b) $5m + 10n + 6m + 10n$
 $= 11m + 20n$

f) $4A - 6B - 12A + 8B$
 $= -8A + 2B$

c) $8x + 12y + 2x - 6y$
 $= 10x + 6y$

g) $6r + 8t - 2r - 3t$
 $= 4r + 5t$

d) $18r^2 - 12rs + 3r - 15s$ same
 $= 18r^2 - 12rs + 3r - 15s$

h) $8ef + 12f^2 - 6e - 12f$ = same