

# Simplifying Expressions

Simplify each expression using the three property

$$1) 4(2 - 7g)$$

$$= (4 \times 2) - (4 \times 7g)$$

$$= 8 - 28g$$

$$2) 3(11q - 5r)$$

$$= (3 \times 11q) - (3 \times 5r)$$

$$= 33q - 15r$$

$$3) 10w + 2(10 + 2w)$$

$$= 10w + (2 \times 10) + (2 \times 2w)$$

$$= 10w + 20 + 4w$$

$$= 10w + 4w + 20$$

$$= 14w + 20$$

$$4) 5 \times 2(4c \times 6)$$

$$= 5 \times (2 \times 4c) \times (2 \times 6)$$

$$= 5 \times (8c) \times 12$$

$$= 5 \times 12 \times 8c$$

$$= 60 \times 8c$$

$$= 480c$$

$$5) (2l - 3m) 6$$

$$= (2l \times 6) - (3m \times 6)$$

$$= 12l - 18m$$

$$6) (6y + 4z) - (3y + 2z)$$

$$= 6y + 4z - 3y - 2z$$

$$= 6y - 3y + 4z - 2z$$

$$= 3y + 2z$$

$$7) (2a - 3b) - (6a - 4b)$$

$$= (2a - 3b - 6a + 4b)$$

$$= 2a - 6a - 3b + 4b$$

$$= -4a + b$$

$$8) 6(3q + 4) - 9q$$

$$= (6 \times 3q) + (6 \times 4) - 9q$$

$$= 18q + 24 - 9q$$

$$= 9q + 24$$

$$9) -3(6d - 11) + 13$$

$$= (-3 \times 6d) - (-3 \times 11) + 13$$

$$= -18d + 33 + 13$$

$$= 18d + 46$$

$$10) (2m - 4n) 5$$

$$= (2m \times 5) - (4n \times 5)$$

$$= 10m - 20n$$

$$11) (4a - 6b) - (12a - 8b)$$

$$= 4a - 6b - 12a + 8b$$

$$= 4a - 12a - 6b + 8b$$

$$= -8a + 2b$$

$$12) 9(3 - 6g)$$

$$= (9 \times 3) - (9 \times 6g)$$

$$= 27 - 54g$$

$$13) (5m - 4n) 2$$

$$= (5m \times 2) - (4n \times 2)$$

$$= 10m - 8n$$