

Laws of Indices

Workout

Question 1:

- (a) 2^4 (b) 2^5 (c) 2^8 (d) 2^7 (e) 2^{14} (f) 2^3
(g) 2^5 (h) 2^{16} (i) 2^{11} (j) 2^9 (k) 2^{11} (l) 2^8

Question 2:

- (a) 5^3 (b) 5^5 (c) 5^7 (d) 5^2 (e) 5^2 (f) 5^7
(g) 5^3 (h) 5^6 (i) 5^{-4} (j) 5^{-2} (k) 5^{40} (l) 5^0

Question 3:

- (a) 3^3 (b) 3^5 (c) 3^5 (d) 3^{15} (e) 3^0 (f) 3^{-2}
(g) 3^6 (h) 3^{-5}

Question 4:

- (a) 8^{10} (b) 8^6 (c) 8^{12} (d) 8^{20} (e) 8^{18} (f) 8^{21}
(g) 8^{36} (h) 8^{18} (i) 8^{32} (j) 8^{-15} (k) 8^{-10}

Question 5:

- (a) y^{10} (b) y^2 (c) y^4 (d) y^{15} (e) y^6 (f) y^{-4}
(g) y^{45} (h) y^{13} (i) y^{13} (j) y^{12} (h) y^3

Apply

Question 1:

They have done $2 \times 2 = 4$ and added the powers. It should be 2^9 .

They have divided the powers instead of taking away. It should be 7^{10} .

They have multiplied the powers instead of adding. It should be 6^7

Question 2:

For example,

$m=2, n=6$ or $m=7, n=1$ or $m=4, n=4$.