**+BAB 5 : INDEKS**

**NAMA : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**KELAS : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**5.2 : PENDARABAN NOMBOR DALAM**

**TATATANDA INDEKS**

**CONTOH 1**

|  |
| --- |
| (a)84 x 83 (b) *k*2 x *k*7 (c) 2*p*3 x 3*p*284+3 = 87 *k*2+7 = *k*9  (2 x 3) x *p3+2* = 6*p*5 |

|  |  |  |
| --- | --- | --- |
| 1. 2² x 25
 | 1. (-5)8 x (-5)3

  | 1. 74 x 7 x 72
 |
| 1. *p*4  x *p*
 | 1. 4*m12*  x 6*m3*
 | 1. -7*n2*  x 2*n5*  x (-*n3*)
 |
| 1. 4 x 43 x 46
 | 1. 24 x 23 x 22
 | 1. (-6)3 x (-6)2 x (-6) x (-6)7
 |
| 1. ($ \frac{4 }{9}$)3 x ($ \frac{4 }{9}$)2 x ($ \frac{4 }{9}$)8
 | 1. (4.2)4 x (4.2)2
 | 1. *n* x *n3* x *n*5
 |
| 1. 3*p*2 x 5*p*4
 | 1. 2*k* x (-6*k*3) x 4*k*2
 | 1. 5*m*5 x *m*2 x 3*m*3
 |

**LATIHAN 1**

A. Permudahkan setiap yang berikut.

 *Simplify the following.*

|  |  |  |
| --- | --- | --- |
| 1. 27 x 2 x 29
 | 1. ($ \frac{3 }{5}$)2 x ($ \frac{3 }{5}$)3

  | 1. (-3)9 x (-3)4
 |
| 1. (1.2)5 x (1.2) x (1.2)8
 | 1. -7*h*5 x 2*h*3 x 3*h*2 x *h*7
 | 1. $\frac{5 }{6}$ *s*4 x $ \frac{4}{5}$ *s* x 9*s*7
 |
| 1. 53 x 5
 | 1. (-2)4 x (-2) x (-2)2
 | 1. ($ \frac{3 }{4}$)4 x $\frac{3 }{4}$ x ($ \frac{3 }{4}$)5
 |
| 1. *k*3 x *k* x *k*5
 | 1. *p* x 6*p3* x 3*p*
 | 1. 5*n3* x $\frac{3 }{10}$*n4* x 4*n*
 |
| 1. 6*r*2 x 9*r*4
 | 1. 5*j* x (-7*j*3) x 2*j*2
 | 1. 4*w*5 x 2*w*2 x 2*w*4
 |
| 1. 8*u* x *u* x ½*u*
 | 1. 3*b* x 5*b x* 6*b*
 | 1. 2*t* x *t*2 x 6*t*4
 |

**CONTOH 2**

|  |  |
| --- | --- |
| 55  x 78  x 5= 55+1 x 78= 56 x 78 | 1. 24 x 32 x 23
 |
| (b) 5 x 43 x 42 x 55 | (c) (4.2)4 x (1.2)3 x (4.2)2 |
| (d) $( \frac{2}{5} $)2 x $( \frac{3}{7} $) x $( \frac{2}{5} $)4 x $( \frac{3}{7} $)5 | (e) *k*6 x *h*2 x *k* x *h*3 x *k*4 |
| (f) 2*m*2 x 5*n*4 x 3*m*4 x *n* | (g) 4*x*3 x $( -\frac{1}{2} y$2) x 2*x* x 3*y4* |
| (h) 3*r*2  x (-4*s*3) x $( -\frac{1}{3} r$4) x 2*s*2 | 1. *p*4x $\frac{1}{3} $*q*3 x *p* x 8*q2*
 |
| (k) (-6*k*6) x (-2*h4*) x *h8* x *k*4 | (l) 9*r*4 x 2*s*2 x $\frac{1}{6}$ *s*2 x (-3*r2*) |

**LATIHAN 2**

B. Permudahkan setiap yang berikut.

 *Simplify the following.*

|  |  |
| --- | --- |
| 1. (0.7)3 x (0.9)5 x (0.7)9 x (0.9)3
 | 1. $\left(\frac{1}{3}\right)^{6}$x$\left(\frac{2}{5}\right)^{8}$x $\left(\frac{1}{3}\right)^{7}$x $\left(\frac{2}{5}\right)^{2}$
 |
| (e) $\left(\frac{1}{m}\right)^{7}$x $\left(\frac{1}{n}\right)^{9}$x $\left(\frac{1}{m}\right)^{5}$x $\left(\frac{1}{n}\right)^{7}$ | (f)  *a*9 x 2*a* x 3*a* x 4*b*2 x *b* |
| (g) 4*b*2 x $\frac{1}{8}$ *c*6 x 6*b*x *c*2 | (h) $( -\frac{3}{10} e$8) x (-5*f*4) x 2*e*2 |
| (i) 24 x 33 x 22 x 35 | (j) 87 x 64 x 83 x 6 |
| (k) *m*5 x *n*9 x *m*3 | (l) 5*p*6 x 3*q9* x *p* x 2*q2* |
| (m) 8*k*2 x 2*h*7  x $\frac{1}{6}$*k* x (-3*h*2) | (n) 5*m6* x *n* x *n5* x (-3*m*) |

**5.3 : PEMBAHAGIAN NOMBOR DALAM**

**TATATANDA INDEKS**

**CONTOH 3**

|  |  |
| --- | --- |
| 1. 88 ÷ 82 = 88-2  (b) *g*18 ÷ *g*6 = *g*18-6

 = 86 | 1. 312 ÷ 34
 |
| (b) *m*15 ÷ *m*5 | (c) $\left(\frac{3}{5}\right)^{10}$÷ $\left(\frac{3}{5}\right)^{6}$ | (d) 42*v*8 ÷ 7*v*7 |
| (e) (-6*h12*) ÷ 24*h*9 | (f) (-3*y*5) ÷ (-3*y*4) ÷  | (g) (-63*p*14) ÷ (9*p*14) |
| (h) *k*15 x *k*5 | (i) (- *p* )11 ÷ (- *p* )7  | (j) $\frac{m^{10}}{m^{6}}$ |
| (k) 36*x*4 ÷ 9*x*2 | (l) 12*y*9 ÷ (-6*y*3) | (m) $\frac{24n^{8}}{4n}$ |
| (n) 20*n*3 ÷ 4*n* | (o) $\frac{27w³ }{9w}$ | (p) 28*r*9*s*5 ÷ 7*r*4*s*5 |

**LATIHAN 3**

A. Permudahkan setiap yang berikut.

 *Simplify the following.*

|  |  |  |
| --- | --- | --- |
| 1. 78 ÷ 72
 | 1. 46 ÷ 45
 | 1. (-6)12 ÷ (-6)4
 |
| (d) $\frac{2³}{2²}$ | (e) $\frac{5²}{5}$ | (f) 311 ÷ 37 ÷ 3 |
| (g) 68 ÷ 62 | (h) *d*7 ÷ *d*4 | (i) *g*15 ÷ *g*5 |
| (j) *y*8 ÷ *y*4 | (k) (-*m*)12 ÷ (-*m*)*5* | (l) 8*r*9 ÷ 4*r*5 |
| (m) 48*p*7 ÷ 6*p*5 | (n) 24*q*11 ÷ (-4*q*5) | (o) 18*m*6 ÷ 6*m*2 |
| (p) *k*15 ÷ *k*15 | (q) -12*n*14 ÷ -4*n*6 | (r) -42*h*16 ÷ 7*h*4 |

**5.4 : NOMBOR DAN SEBUTAN ALGEBRA DALAM**

**TATATANDA INDEKS YANG DIKUASAKAN**

**CONTOH 4**

|  |  |
| --- | --- |
| 1. $\left(2^{2}\right)^{5}$ (b) $\left(x^{3}\right)^{4}$ (c) $\left[\left(-d\right)^{4}\right]^{2}$

22x5 = 210 *x*3x4 = *x*12 (-*d)*4x2 = (-*d*)8 | (a) $\left(5^{3}\right)^{2}$ |
| 1. $\left(8^{7}\right)^{3}$
 | 1. $\left[\left(15\right)^{12}\right]^{0}$
 | (d) $\left(n^{2}\right)^{7}$ |
| (e) $\left(p^{8}\right)^{2}$ | (f) $\left[\left(\frac{2}{5}\right)^{3}\right]^{5}$ | (g) (-*m*6)0 |
| (h) $\left[\left(-7\right)^{5}\right]^{2}$ | (i) $\left[\left(-\frac{k}{2}\right)^{4}\right]^{6}$ | (j) ( *x*8)3 |
| (k) ( *y*4)6 | (l) ( *z*9)0 | (m) ( *q*5)5 |
| (n) $\left[\left(-k\right)^{10}\right]^{2}$ | (o) ) $\left[\left(-h\right)^{3}\right]^{7}$ | (p) (*k*5)5 |

**LATIHAN 4**

A. Permudahkan setiap yang berikut.

 *Simplify the following.*

|  |  |  |
| --- | --- | --- |
| (a) (54)3 | (b) (135)2 | (c) (73)6 |
| 1. (*m*2)7
 | 1. (*p*8)4
 | 1. (33)5
 |
| (f) (69)4 | (g) (112)7 | (h) $\left[\left(-5\right)^{6}\right]^{2}$ |
| (i) $\left[\left(-10\right)^{8}\right]^{0}$ | (j) $\left[\left(-12\right)^{2}\right]^{8}$ | (k) $\left[(-11)³\right]$4 |
| (l) $\left[(-m)²\right]$8 | (m) $\left[(-t)²\right]$3 | (n) $\left[(-h)²\right]$9 |
| (o) $\left[(-n)²\right]$7 | (p) $\left[(-k)²\right]$3 | (q) $\left[(-g)²\right]$6 |

**CONTOH 5**

|  |
| --- |
| 1. (25)4 x (53)2 = (b) $\left(\frac{x^{5}}{y^{3}}\right)^{7}$ = (c) (3*hk*4*m*2)4 =

 34 x *h*4 x *k*4x4 x *m*2x425x4 x 53x2 = 220 x 56 $\frac{x^{5x7}}{y^{3x7}}$= $\frac{x^{35}}{y^{21}}$ = 81*h4k16m8* |
| (a) $\left(15^{6}÷2^{7}\right)^{3}$ | (b) *e*4 x $\left(f^{2}g^{3}\right)^{5}$ | (c) $\left(\frac{-2p^{8}}{q^{2}}\right)^{4}$ |
| (d) $\left(\frac{1}{2}m^{5}n^{4}\right)^{3}$ | (e) $\left(3v^{6}w^{5}\right)^{3 }$x 2*vw*4 | (f) $\left(2x^{3}y^{6}\right)^{3 }$÷ $8\left(m^{5}n^{4}\right)^{2 }$ |
| (g) $\left(\frac{7^{5}}{5^{2}}\right)^{4}$ | (h) $\left(\frac{e^{5}}{2f^{3}}\right)^{5}$ | (i) $\left(\frac{2r^{2}}{3s^{4}}\right)^{4}$ |
| (j) $\left(\frac{3hg^{2}}{2k^{4}}\right)^{2}$ | (k) $\left(\frac{6m^{2}}{n^{4}}\right)^{2}$ | (l) $\left(m^{2}n^{4}\right)^{4}$ |
| (m) $\left(8xy^{6}\right)^{5}$ | (n) $\left(-4a^{2}b^{3}c^{4}\right)^{3}$ | (o) $\left(3^{5} × 7^{2} × 10^{4}\right)$2 |

**LATIHAN 5**

B. Permudahkan setiap yang berikut.

 *Simplify the following.*

|  |  |  |
| --- | --- | --- |
| (a) 38 x 76 ÷ 75 = | (b) *pq* x *q*5 ÷ *pq*5 = | (c) $\left(3^{3} × 5^{2}\right)^{2}$x $\left(2^{3}\right)^{2}$ |
| (d) $\frac{\left(2^{4}\right)^{3}× 8^{5}}{2^{9}}$ | (e) $\frac{\left(m^{2}n^{6}\right)^{3}}{m^{6}n^{7}}$ | (f) $\frac{\left(k^{2}h^{5}\right)^{3}}{\left(kh^{2}\right)^{6}}$ |
| (g) $\frac{13^{6}b^{5}c^{7}}{\left(13bc\right)^{5}}$ | (h) $\left(4f^{2}h^{5}\right)^{3}$÷ $\left(2fh^{2}\right)^{4}$ | (i) $\left(3p^{3}q\right)^{2}$ x 2*pq*2 x $\left(5q\right)^{0}$ |
| (j) $\left[2a^{3}b^{2}×\left(ab\right)^{3}\right]^{2}$ | (k) $\frac{\left(3^{3}x^{4}y\right)^{3}× \left(xy^{6}z^{4}\right)^{2}}{\left(3xy^{2}z\right)^{7}}$ | (l) $\frac{\left(4t^{3}u^{2}\right)^{2}× \left(2tu^{3}\right)^{3}}{\left(2tu^{3}\right)^{2}×4 t^{2}}$ |
| (m) $\left(\frac{2f^{3}}{5h^{2}}\right)^{4}$ | (n) $\left(\frac{k^{2}}{3h^{8}}\right)^{4}$ | (o) $\left(\frac{-2r^{9}}{\left(s^{2}\right)^{7}}\right)^{4}$ |
| (p) $\left(\frac{2^{3}}{3^{4}}\right)^{3}$ | (q) $\left(\frac{3^{4}}{7^{3}}\right)^{2}$ | (r) $\left(\frac{3^{5}}{5^{2}}\right)^{2}$ |

**5.5 : INDEKS NEGATIF**

**CONTOH 6**

|  |  |  |
| --- | --- | --- |
| 1. $3^{-5}×3^{-3} =3^{-5+(-3)}$

 $=3^{-8}$$$ =\frac{1}{3^{8}}$$1. $s^{9}÷s= s^{9-1}$

$$ =s^{8}$$ | (a) $\left(11^{-2}\right)^{-4}$ | (b) $2^{-11}÷2^{-9}$ |
| (c) $\left(y^{-1}\right)^{-7}$ | (d) $3^{-6}×3^{8}×3^{-4}$ | (e) $\left(m^{3}\right)^{-5}×m^{12}÷m^{-5}$ |
| (f) $2^{4}×4^{-3}÷16^{-2}$ | (g) $\frac{\left(5^{-1}×2^{-4}\right)^{-3}}{\left(5^{2}\right)^{4}×2^{-9}}$ | (h) $\frac{\left(m^{-5}n^{-1}\right)^{-2}}{\left(m^{2}n^{-4}\right)^{3}}$ |
| (i) $\left(6k^{-4}\right)^{3}÷\left(k^{4}\right)^{-2}$ | (j) $\frac{5p^{-8}\left(p^{2}q^{3}\right)^{-3}}{\left(p^{5}q^{4}\right)^{-2}}$ | (k) $8\left(x^{2}y^{-1}\right)^{3}×\left(\frac{1}{2}x^{-3}y^{3}\right)^{2}÷\left(x^{2}y\right)^{-3}$ |

**LATIHAN 6**

A. Permudahkan setiap yang berikut.

 *Simplify the following.*

|  |  |  |
| --- | --- | --- |
| (a) $\left(r^{5}\right)^{-4}$ | (b) $6^{-8}×6^{2}×6^{-4}$ | (c) $\left(k^{2}\right)^{-4}×k^{8}÷k^{-6}$ |
| (d) $\left(6^{-6}\right)^{-2}$ | (e) $\left(8^{-2}\right)^{-7}$ | (f) $\frac{3t^{-5}\left(t^{3}s^{4}\right)^{-2}}{\left(t^{5}s^{2}\right)^{-2}}$ |
| (g) $\frac{\left(b^{-3}c^{-3}\right)^{-2}}{\left(bc^{-7}\right)^{2}}$ | (h) $\left(4l^{-2}\right)^{3}÷\left(2l^{5}\right)^{-5}$ | (i) $\left(m^{3}n^{-2}\right)^{2}×\left(m^{-2}n^{2}\right)^{4}÷\left(m^{5}n\right)^{-3}$ |
| (j) $\frac{\left(7^{-5}×3^{-4}\right)^{-2}}{\left(7^{4}\right)^{3}×3^{-5}}$ | (k) $16\left(h^{2}k^{-1}\right)^{5}×\left(\frac{1}{4}h^{-3}k^{3}\right)^{4}$ | (l) $\left(e^{5}f^{2}\right)^{3}÷\left(e^{3}f\right)^{-3}$ |

**5.6 : INDEKS PECAHAN**

**CONTOH 7**

|  |  |  |
| --- | --- | --- |
| $$\left(X^{3}÷X^{\frac{3}{4}}\right)^{\frac{2}{3}}×\left(X^{\frac{1}{2}}×X^{\frac{3}{2}}\right)^{2}$$ $\left(X^{3×\frac{2}{3}}÷X^{\frac{3}{4}×\frac{2}{3}}\right)×\left(X^{\frac{1}{2}+\frac{3}{2}}\right)^{2}$ =$\left(X^{2}÷X^{\frac{1}{2}}\right)×X^{4}$ =$X^{2-\frac{1}{2}+4}$ =$X^{\frac{11}{2}}$ | 1. $9^{\frac{3}{2}}$
 | 1. $8^{\frac{2}{3}}$
 |
| 1. $16^{\frac{3}{2}}$
 | (d) $32^{\frac{4}{5}}$ | (e) $\left(3^{\frac{1}{4}}×3^{2}\right)^{\frac{4}{3}}×\left(3^{\frac{7}{3}}÷3\right)^{\frac{3}{4}}$ |
| (f) $\left(7^{5}\right)^{\frac{1}{5}}×\left(7^{\frac{9}{2}}÷7^{5}\right)^{2}$ | (g) $\frac{\left(2^{3}×2^{\frac{1}{3}}\right)^{\frac{3}{5}}}{\left(2^{\frac{3}{4}}÷2^{\frac{1}{4}}\right)^{4}}$ | (h) $\left(k^{\frac{2}{3}}×k^{\frac{5}{3}}\right)^{2}÷\left(k^{\frac{5}{6}}\right)^{6}$ |
| (i) $\frac{81^{\frac{3}{4}}×9^{\frac{1}{2}}}{27^{\frac{2}{3}}}$ | (j) $\frac{16^{\frac{3}{2}}}{4×64^{\frac{2}{3}}}$ | (k) $\left(5^{\frac{5}{2}}×5^{\frac{1}{2}}\right)^{\frac{2}{3}}÷\left(5^{\frac{1}{4}}×5\right)^{\frac{4}{5}}$ |

**LATIHAN 7**

A. Permudahkan dan cari nilai setiap yang berikut.

 *Simplify and find the value of each of the following.*

|  |  |  |
| --- | --- | --- |
| (a) $9^{\frac{3}{2}}$ | (b) $64^{\frac{2}{3}}$ | (c) $16^{\frac{3}{4}}$ |
| 1. $125^{\frac{4}{5}}$
 | (e) $16^{\frac{3}{4}}×27^{\frac{2}{3}}$ | (f) $\left(5^{\frac{7}{6}}÷5^{\frac{5}{6}}\right)^{6}$ |
| (g) $\left(3^{\frac{2}{3}}×3^{\frac{5}{3}}\right)^{3}÷\left(3^{\frac{2}{3}}×3^{3}\right)^{\frac{3}{11}}$ | (h) $\left(3^{3}\right)^{\frac{1}{3}}÷\left(3^{2}÷3^{\frac{1}{2}}\right)^{2}$ | (i) $\left(4×2\right)^{2}×\left(8^{-2}\right)^{2}$ |
| (j) $\left(3^{2}\right)^{3}÷\left(3×2^{-3}\right)^{2}$ | (k) $\frac{\left(b^{3}c^{9}\right)^{\frac{4}{3}}}{\left(c^{5}\right)^{\frac{4}{5}}×\left(b^{2}c\right)^{2}}$ | (l) $\frac{\left(r^{2}s^{6}\right)^{\frac{3}{2}}}{\left(r^{3}×4s^{6}\right)^{2}}$ |

**5.7 : HUKUM INDEKS**

**CONTOH 8**

|  |  |
| --- | --- |
| 1. $8^{-3}×8^{\frac{2}{3}}×2^{9}$ (b) $\left(5p^{2}q^{\frac{2}{5}}\right)^{2}×5^{-1}p^{-3}q^{\frac{1}{5}}$

=$\left(2^{3}\right)^{-3}×\left(2^{3}\right)^{\frac{2}{3}}×2^{9}$ =$5^{2}p^{4}q^{\frac{4}{5}}×5^{-1}p^{-3}q^{\frac{1}{5}}$=$2^{-9}×2^{2}×2^{9}$ =$5^{2-1}p^{4-3}q^{\frac{4}{5}+\frac{1}{5}}$=$2^{-9+2+9}$ =5*pq*=$2^{2}$=4 | 1. $\frac{16^{3}}{4^{3}×4^{\frac{1}{2}}}$
 |
| (b) $\left(pq^{-\frac{1}{2}}\right)^{3}×q^{\frac{7}{2}}$ | (c) $27^{3}×3^{-9}×9^{\frac{7}{2}}$ | (d) $\frac{9^{\frac{3}{2}}×9^{\frac{5}{2}}}{3^{3}}$ |
| (e) $\frac{5^{\frac{1}{2}}×4×5^{\frac{1}{2}}}{4^{2}}$ | (f) $\left(3^{-4}×2^{-3}\right)^{2}÷\left(2^{\frac{1}{4}}×3^{2}\right)^{-4}$ | (g) $\left(4×7^{-3}\right)^{3}÷\left(49^{-2}×2^{\frac{3}{2}}\right)^{2}$ |
| (h) $\frac{\left(2×4^{\frac{1}{2}}×9^{-2}\right)^{2}}{\left(2^{\frac{1}{4}}×27^{\frac{1}{3}}\right)^{4}}$ | (i) $\left(2^{\frac{1}{8}}p^{\frac{3}{2}}\right)^{4}×\left(10p\right)^{\frac{3}{2}}÷\left(5p\right)^{\frac{1}{2}}$ | (j) $\left(9a^{3}b^{\frac{1}{3}}\right)^{\frac{1}{2}}÷\left(a^{\frac{1}{2}}b^{\frac{1}{6}}\right)^{3}$ |

**LATIHAN 8**

A. Permudahkan dan cari nilai setiap yang berikut.

 *Simplify and find the value of each of the following.*

|  |  |  |
| --- | --- | --- |
| (a) $\frac{6^{\frac{1}{2}}×24^{\frac{1}{2}}}{16^{\frac{3}{4}}}$ | (b) $\left(81^{\frac{3}{4}}÷3^{\frac{1}{2}}\right)^{\frac{4}{5}}×9^{\frac{3}{2}}$ | (c) $\frac{3^{3}×\left(4^{\frac{1}{2}}×2^{\frac{3}{2}}\right)^{2}}{2^{7}}$ |
| (d) $\frac{\left[m^{\frac{7}{2}}×\left(m\right)^{\frac{3}{2}}n\right]^{2}}{mn^{3}}$ | (e) $\left(8k\right)^{2}×\left(2k\right)^{-2}×8^{\frac{2}{3}}$ | (f) $\frac{10^{-3}×1000^{2}}{\left(10^{\frac{1}{3}}\right)^{9}×10^{-2}}$ |
| (g) $\frac{3^{-2}×27}{\left(2×64^{\frac{1}{3}}\right)^{2}}$ | (h) $\left(m^{-2}\right)^{3}×m^{7}÷m^{\frac{1}{4}}$ | (i) $\left(n^{\frac{1}{2}}\right)^{2}÷n^{-3}×n^{5}$ |
| (j) $\frac{k^{\frac{5}{4}}×k^{\frac{3}{4}}}{k^{-2}}$ | (k) $\frac{\left(p^{4}q^{-2}\right)^{3}×\left(q^{\frac{3}{2}}\right)^{6}}{p^{6}}$ | (l) $\frac{27^{\frac{1}{3}}×9^{\frac{3}{2}}}{81^{\frac{3}{4}}}$ |

**CONTOH 8 : SOALAN KBAT**

Selesaikan setiap yang berikut.

*Solve each of the following.*

|  |  |
| --- | --- |
| (a) $\left(3r^{2}s\right)^{4}÷r^{8}s^{7}×\left(s^{3}\right)^{2}$ | (b) $\left(-2m^{2}k\right)^{3}×\left(k^{3}\right)^{2}÷m^{4}k^{7}$ |
| (c) $\left(5ab^{2}\right)^{3}×\left(b^{3}\right)^{2}÷a^{3}b^{8}$ | (d) $\left(9pq^{2}r\right)^{\frac{1}{2}}×\left(pr\right)^{\frac{3}{2}}÷p^{-1}q$ |
| (e) $\frac{\left(4p^{\frac{1}{3}}\right)^{5}×p^{\frac{4}{3}}}{16p^{2}}$ | (f) $\frac{\sqrt{36fg^{2}h^{3}}}{\left(4fh\right)^{\frac{1}{2}}}×6f^{2}g^{3}$ |

**LATIHAN 8 : SOALAN KBAT**

Selesaikan setiap yang berikut.

*Solve each of the following.*

|  |  |
| --- | --- |
| (a) $\left(3m^{2}n^{\frac{2}{5}}\right)^{2}×3^{-1}m^{-3}n^{\frac{1}{5}}$ | (b) $\left(4x^{3}y^{\frac{1}{3}}\right)^{\frac{1}{2}}÷\left(x^{\frac{1}{2}}y^{\frac{1}{6}}\right)^{3}$ |
| (c) $\left(3x^{-4}\right)^{3}÷\left(x^{3}\right)^{-2}$ | (d) $\left(m^{3}n^{-4}\right)^{2}×m^{4}n^{3}÷\left(m^{3}n^{-2}\right)^{3}$ |
| (e) $\left(9x^{3}y^{-1}\right)^{3}×\left(\frac{1}{3}x^{-2}y^{3}\right)^{2}÷\left(4yx^{2}\right)^{3}$ | (f) $\left(3xy^{4}\right)^{2}×\left(y^{3}\right)^{2}÷x^{3}y^{10}$ |