



Radicals - Multiplication Intro

- 1** Multiply the radical expressions and simplify the answer

$$\sqrt{13} \cdot \sqrt{52}$$

A	130	B	26
C	1		

- 2** Multiply the radical expressions and simplify the answer

$$\sqrt{99} \cdot \sqrt{44}$$

A	66	B	1
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- 3** Multiply the radical expressions and simplify the answer

$$\sqrt{125} \cdot \sqrt{28}$$

A	$30\sqrt{35}$	B	$10\sqrt{35}$
C	10		

- 4** Multiply the radical expressions and simplify the answer

$$\sqrt{20x} \cdot \sqrt{5x}$$

A	$10\sqrt{x}$	B	x
C	$10x$		

- 5** Multiply the radical expressions and simplify the answer

$$\sqrt{48y^2} \cdot \sqrt{75y^2}$$

A	$60y^2$	B	$60y\sqrt{y}$
C	$240y^2$	D	$60y^3$

- 6** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{208} \cdot \sqrt{13}}{13}$$

A	104	B	52
C	0	D	4

- 7** Multiply the radical expressions and simplify the answer

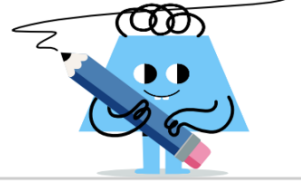
$$\sqrt{12w^3t^2} \cdot \sqrt{28w^2t^4}$$

A	$4w^3t^3\sqrt{21w}$	B	$4w^2t^3\sqrt{w}$
C	$8w^2t^3\sqrt{21w}$	D	$4w^2t^3\sqrt{21}$
E	$4w^2t^3\sqrt{21w}$		

- 8** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{44} \cdot \sqrt{99}}{3}$$

A	22	B	7
C	66	D	132



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- 9** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{2m^2} \cdot \sqrt{32m^2}}{2}$$

A	$8m$	B	$2m\sqrt{m}$
C	$24m^2$	D	$4m^2$
E	$8m^2\sqrt{m}$		

- 10** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{52} \cdot \sqrt{63}}{3}$$

A	6	B	1
C	$6\sqrt{91}$	D	$2\sqrt{91}$

- 11** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{12x^2} \cdot \sqrt{27x^4}}{2}$$

A	$9x^3$	B	$18x^2\sqrt{x}$
C	$18x^3\sqrt{x}$	D	$4x^3$

- 12** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{50t^3q} \cdot \sqrt{45t^3q}}{3}$$

A	$60t^3q\sqrt{10}$	B	$45t^3q\sqrt{10}$
C	$5t^3q\sqrt{10}$	D	$15t^3\sqrt{10q}$
E	$t^3\sqrt{10}$		

- 13** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{325} \cdot \sqrt{13}}{\frac{1}{3}}$$

A	585	B	65
C	195		

- 14** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{27} \cdot \sqrt{12}}{\frac{1}{2}}$$

A	54	B	18
C	36	D	72

- 15** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{13m^2} \cdot \sqrt{52m^2}}{\frac{1}{2}}$$

A	$104m^2$	B	$52m^2$
C	$104m$	D	$26m^2$

- 16** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{63} \cdot \sqrt{8}}{\frac{1}{2}}$$

A	$12\sqrt{14}$	B	$24\sqrt{14}$
C	$6\sqrt{14}$		



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- 17** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{18} \cdot \sqrt{32n^3}}{\frac{1}{5}}$$

A	$24n\sqrt{n}$	B	$600n\sqrt{n}$
C	$120n\sqrt{n}$	D	$24n^2$

- 18** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{13} \cdot \sqrt{208}}{\frac{2}{4}}$$

A	208	B	104
C	52		

- 19** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{80} \cdot \sqrt{48r^3t^4}}{\frac{1}{2}}$$

A	$32rt^2\sqrt{15r}$	B	$64r^2t^2\sqrt{15}$
C	$64rt^2\sqrt{15r}$	D	$16rt^2\sqrt{15r}$
E	$64rt\sqrt{15r}$		

- 20** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{44} \cdot \sqrt{99}}{\frac{3}{2}}$$

A	66	B	44
C	29		

- 21** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{63} \cdot \sqrt{32}}{\frac{3}{2}}$$

A	$12\sqrt{14}$	B	$48\sqrt{14}$
C	$8\sqrt{14}$	D	$5\sqrt{14}$

- 22** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{52y^4} \cdot \sqrt{13y^4}}{\frac{13}{3}}$$

A	$26y^3$	B	y^4
C	$6y^4$	D	$y^4\sqrt{y}$
E	$26y^3\sqrt{y}$		

- 23** Multiply the radical expressions and simplify the answer

$$\sqrt{20w^2} \cdot \sqrt{45w^2}$$

A	$120w^2$	B	w^2
C	$30w^3$	D	$30w\sqrt{w}$
E	$30w^2$		

- 24** Multiply the radical expressions and simplify the answer

$$\frac{\sqrt{12pm^3} \cdot \sqrt{44p}}{\frac{2}{3}}$$

A	$4pm\sqrt{33pm}$	B	$4pm\sqrt{33m}$
C	$4pm\sqrt{33}$	D	$4m\sqrt{33pm}$
E	$6pm\sqrt{33m}$		



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25 Multiply the radical expressions and simplify the answer

$$(\sqrt{13} - 2) \cdot \sqrt{3}$$

A	$1 - 2\sqrt{3}$
B	$\sqrt{39} - 2\sqrt{3}$
C	$\sqrt{39} - 2$
D	$4\sqrt{39} - 2\sqrt{3}$

26 Multiply the radical expressions and simplify the answer

$$\sqrt{7} \cdot (\sqrt{2} + \sqrt{2})$$

A	$2\sqrt{14}$	B	$3\sqrt{14}$
C	$2 + \sqrt{14}$	D	$\sqrt{14} + 1$

27 Multiply the radical expressions and simplify the answer

$$\sqrt{13} \cdot (2d^2 + \sqrt{5d})$$

A	$d^2\sqrt{13} + \sqrt{65d}$	B	$2\sqrt{13} + \sqrt{65d}$
C	$2d^2\sqrt{13} + \sqrt{65d}$	D	$2d^2\sqrt{13} + 2\sqrt{65d}$
E	$2d^2\sqrt{13} + d\sqrt{65d}$		

28 Multiply the radical expressions and simplify the answer

$$\sqrt{13} \cdot (r^2\sqrt{11} + r\sqrt{13r})$$

A	$3r^2\sqrt{143} + 13r\sqrt{r}$
B	$r^2\sqrt{143} + 13r\sqrt{r}$
C	$r^2\sqrt{143} + 13r$
D	$r^2\sqrt{143} + 13r^2$

29 Multiply the radical expressions and simplify the answer

$$\sqrt{11} \cdot (\sqrt{2} - 2\sqrt{2})$$

A	$-1\sqrt{22}$	B	$-4\sqrt{22}$
C	$\sqrt{22}$		

30 Multiply the radical expressions and simplify the answer

$$2\sqrt{5x} \cdot (5d^2\sqrt{5x} + dx\sqrt{13x})$$

A	$50d^2x + 2d^{-1}x^2\sqrt{65}$	B	$50d^2x + 2d^2x^2\sqrt{65}$
C	$5d^2x + 2dx^2\sqrt{65}$	D	$50d^2x\sqrt{x} + 2dx^2\sqrt{65}$
E	$50d^2x + 2dx^2\sqrt{65}$		



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31 Multiply the radical expressions and simplify the answer

$$(\sqrt{11} + 4\sqrt{5}) \cdot 3\sqrt{3}$$

A	$3\sqrt{33} + \sqrt{15}$
B	$\sqrt{33} + 12\sqrt{15}$
C	$6 + 12\sqrt{15}$
D	$3\sqrt{33} + 12\sqrt{15}$

32 Multiply the radical expressions and simplify the answer

$$mz\sqrt{2z} \cdot (\sqrt{11z} + 2mz^2\sqrt{13m})$$

A	$m^{-1}z^2\sqrt{22} + 2m^2z^3\sqrt{26zm}$	B	$m\sqrt{22} + 2m^2z^3\sqrt{26zm}$
C	$mz^2\sqrt{22} + 2m^2z^3\sqrt{26zm}$	D	$mz^2 + 2m^2z^3\sqrt{26zm}$
E	$mz^2\sqrt{22} + 2m^2z^4\sqrt{26zm}$		

33 Multiply the radical expressions and simplify the answer

$$(5 - \sqrt{5}) \cdot (\sqrt{3} + 5)$$

A	$5\sqrt{3} + 2\sqrt{15} + 25 - 5\sqrt{5}$	B	$5\sqrt{3} - 5\sqrt{15} + 50 - 5\sqrt{5}$
C	$5\sqrt{3} - \sqrt{15} + 25 - 5\sqrt{5}$	D	$\sqrt{3} - \sqrt{15} + 1 - 5\sqrt{5}$
E	$3\sqrt{3} - \sqrt{15} + 25 + 2\sqrt{5}$		

34 Multiply the radical expressions and simplify the answer

$$(\sqrt{13} + \sqrt{3}) \cdot (\sqrt{3} - \sqrt{5})$$

A	$5 + \sqrt{65} + \sqrt{15}$	B	$4 + \sqrt{65} + \sqrt{15}$
C	$\sqrt{39} + 12 - \sqrt{65} + \sqrt{15}$	D	$\sqrt{39} + 3 - \sqrt{65} - \sqrt{15}$
E	$\sqrt{39} - \sqrt{2} + \sqrt{65} - \sqrt{15}$		



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35 Multiply the radical expressions and simplify the answer

$$(2\sqrt{3} - \sqrt{11}) \cdot (\sqrt{11} - 2\sqrt{7})$$

A $\sqrt{33} - 33 - 4\sqrt{21} + 2\sqrt{77}$

B $2\sqrt{2} - 9 - 4\sqrt{21}$

C $-9 - 5\sqrt{21} + 2\sqrt{77}$

D $2\sqrt{33} + 9 - \sqrt{21}$

E $2\sqrt{33} - 11 - 4\sqrt{21} + 2\sqrt{77}$

36 Multiply the radical expressions and simplify the answer

$$(5d^2 + \sqrt{5}) \cdot (\sqrt{13} - 2d\sqrt{d})$$

A $5d^2\sqrt{13} + \sqrt{65} - 10d^3\sqrt{d} - 2d\sqrt{5d}$

B $5d^2\sqrt{13} + 1 - 10d^3\sqrt{d} - 4d\sqrt{5d}$

C $5d^2\sqrt{13} + 2\sqrt{65} + 10d^3\sqrt{d} - 2d^2\sqrt{5d}$

D $5d^2\sqrt{13} + \sqrt{65} - 10d^3\sqrt{d} - 2d\sqrt{5}$

E $5d^2\sqrt{13} + 5\sqrt{65} - 10d^3 - 2d\sqrt{5d}$

37 Multiply the radical expressions and simplify the answer

$$(b\sqrt{13} - b\sqrt{11}) \cdot (\sqrt{3} - \sqrt{7})$$

A $b - b^2\sqrt{91} - b\sqrt{33} + b\sqrt{77}$

B $b\sqrt{39} - b\sqrt{91} - b\sqrt{33} + b\sqrt{77}$

C $b\sqrt{39} + b\sqrt{91} - b^2\sqrt{33} + b\sqrt{77}$

D $b^{-1}\sqrt{39} - b\sqrt{91} - b^2\sqrt{33} - b\sqrt{77}$

E $b\sqrt{39} - b\sqrt{91} - b^{-1} + b\sqrt{77}$

38 Multiply the radical expressions and simplify the answer

$$(p^2d^2\sqrt{7} + 4p\sqrt{7}) \cdot (d\sqrt{7pd} - 2p^2d\sqrt{3d})$$

A $7p^2d^3\sqrt{pd} - 2p^4d^3\sqrt{21d} - 28pd\sqrt{pd} - p^3d\sqrt{21d}$

B $7p^2d^3\sqrt{pd} - 2p^4d^3\sqrt{21d} + 28pd\sqrt{pd} - 8p^3d\sqrt{21d}$

C $7p^2d^3\sqrt{pd} - 2p^4d^3\sqrt{d} + 28p^{-1}d\sqrt{pd} - 8p^3d\sqrt{21d}$

D $7p^2d^3\sqrt{pd} + 2p^4d^3\sqrt{21d} - 28pd\sqrt{pd} - 8p^5d\sqrt{3d}$

E $7p^5d^3\sqrt{pd} - 2p^4d^3\sqrt{21d} - 28pd\sqrt{pd} - 8p^3d\sqrt{21d}$