

NOTRE DAME DE LA MERCI - CORRIGE

$1^2 = 1$	$2^2 = 4$	$3^2 = 9$	$4^2 = 16$
$5^2 = 25$	$6^2 = 36$	$7^2 = 49$	$8^2 = 64$
$9^2 = 81$	$10^2 = 100$	$11^2 = 121$	$12^2 = 144$
$13^2 = 169$	$14^2 = 196$	$15^2 = 225$	$16^2 = 256$

EXERCICE 1

a.	18	=	9×2	=	$3^2 \times 2$
b.	12	=	4×3	=	$2^2 \times 3$
c.	24	=	4×6	=	$2^2 \times 6$
d.	28	=	4×7	=	$2^2 \times 7$
e.	45	=	9×5	=	$3^2 \times 5$
f.	72	=	36×2	=	$6^2 \times 2$
g.	150	=	25×6	=	$5^2 \times 6$
h.	675	=	225×3	=	$15^2 \times 3$
i.	288	=	144×2	=	$12^2 \times 2$
j.	588	=	196×3	=	$14^2 \times 3$

EXERCICE 2

a. Écrire sous la forme $a\sqrt{2}$ avec a entier :

$\sqrt{18} = \sqrt{3^2 \times 2} = 3\sqrt{2}$	$\sqrt{50} = \sqrt{5^2 \times 2} = 5\sqrt{2}$
$\sqrt{98} = \sqrt{7^2 \times 2} = 7\sqrt{2}$	$\sqrt{162} = \sqrt{9^2 \times 2} = 9\sqrt{2}$

b. Écrire sous la forme $a\sqrt{3}$ avec a entier :

$\sqrt{12} = \sqrt{2^2 \times 3} = 2\sqrt{3}$	$\sqrt{27} = \sqrt{3^2 \times 3} = 3\sqrt{3}$
$\sqrt{300} = \sqrt{10^2 \times 3} = 10\sqrt{3}$	$\sqrt{192} = \sqrt{8^2 \times 3} = 8\sqrt{3}$

c. Écrire sous la forme $a\sqrt{5}$ avec a entier :

$\sqrt{20} = \sqrt{2^2 \times 5} = 2\sqrt{5}$	$\sqrt{45} = \sqrt{3^2 \times 5} = 3\sqrt{5}$
$\sqrt{80} = \sqrt{4^2 \times 5} = 4\sqrt{5}$	$\sqrt{245} = \sqrt{7^2 \times 5} = 7\sqrt{5}$

d. Écrire sous la forme $a\sqrt{6}$ avec a entier :

$\sqrt{96} = \sqrt{4^2 \times 6} = 4\sqrt{6}$	$\sqrt{150} = \sqrt{5^2 \times 6} = 5\sqrt{6}$
$\sqrt{216} = \sqrt{6^2 \times 6} = 6\sqrt{6}$	$\sqrt{384} = \sqrt{8^2 \times 6} = 8\sqrt{6}$

e. Écrire sous la forme $a\sqrt{13}$ avec a entier :

$\sqrt{637} = \sqrt{7^2 \times 13} = 7\sqrt{13}$	$\sqrt{468} = \sqrt{6^2 \times 13} = 6\sqrt{13}$
$\sqrt{1\ 573} = \sqrt{11^2 \times 13} = 11\sqrt{13}$	$\sqrt{2\ 925} = \sqrt{15^2 \times 13} = 15\sqrt{13}$

EXERCICE 3

a. $\sqrt{40} = \sqrt{4 \times 10} = \sqrt{2^2 \times 10} = 2\sqrt{10}$
b. $\sqrt{99} = \sqrt{9 \times 11} = \sqrt{3^2 \times 11} = 3\sqrt{11}$
c. $\sqrt{54} = \sqrt{9 \times 6} = \sqrt{3^2 \times 6} = 3\sqrt{6}$
d. $\sqrt{63} = \sqrt{9 \times 7} = \sqrt{3^2 \times 7} = 3\sqrt{7}$
e. $\sqrt{32} = \sqrt{16 \times 2} = \sqrt{4^2 \times 2} = 4\sqrt{2}$
f. $\sqrt{288} = \sqrt{144 \times 2} = \sqrt{12^2 \times 2} = 12\sqrt{2}$
g. $\sqrt{675} = \sqrt{225 \times 3} = \sqrt{15^2 \times 3} = 15\sqrt{3}$
h. $\sqrt{72} = \sqrt{36 \times 2} = \sqrt{6^2 \times 2} = 6\sqrt{2}$
i. $\sqrt{845} = \sqrt{169 \times 5} = \sqrt{13^2 \times 5} = 13\sqrt{5}$
j. $\sqrt{847} = \sqrt{121 \times 7} = \sqrt{11^2 \times 7} = 11\sqrt{7}$

EXERCICE 4

$\sqrt{\frac{4}{3}} = \frac{2}{\sqrt{3}}$	$\sqrt{\frac{9}{7}} = \frac{3}{\sqrt{7}}$	$\sqrt{\frac{16}{5}} = \frac{4}{\sqrt{5}}$
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EXERCICE 5

$\sqrt{\frac{2}{9}} = \frac{\sqrt{2}}{3}$	$\sqrt{\frac{5}{36}} = \frac{\sqrt{5}}{6}$	$\sqrt{\frac{13}{25}} = \frac{\sqrt{13}}{5}$
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EXERCICE 6

$\frac{1}{\sqrt{5}} = \frac{\sqrt{5}}{5}$	$\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$	$\frac{4}{\sqrt{7}} = \frac{4}{\sqrt{7}} \times \frac{\sqrt{7}}{\sqrt{7}} = \frac{4\sqrt{7}}{7}$
$\frac{\sqrt{2}}{\sqrt{3}} = \frac{\sqrt{6}}{3}$	$\frac{\sqrt{5}}{\sqrt{7}} = \frac{\sqrt{35}}{7}$	$\frac{\sqrt{4}}{\sqrt{11}} = \frac{2\sqrt{11}}{11}$
$\sqrt{\frac{4}{5}} = \frac{2\sqrt{5}}{5}$	$\frac{\sqrt{\frac{7}{2}}}{2} = \frac{\sqrt{14}}{2}$	$\sqrt{\frac{1}{3}} = \frac{\sqrt{3}}{3}$