

SMART EXAM RESOURCES
SUBJECT: CAMBRIDGE INTERNATIONAL MATH
TOPIC: NUMBERS
SUB-TOPIC: HIGHEST COMMON FACTOR
SET-1-QP-MS

1 Find the highest common factor (HCF) in each list.

(a) 24 56 72

Answer(a) [1]

(b) x^3y^4 x^2y^5 x^4y^2

Answer(b) [2]

MARK SCHEME:

(a)	8	1	
(b)	x^2y^2	2	B1 for 1 correct term

2

$$a = 2^3 \times 3 \times 5^2 \qquad b = 2^2 \times 3^2 \times 7^6$$

(a) Find, giving each answer as the product of prime factors,

(i) the highest common factor (HCF) of a and b ,

Answer(a)(i) [1]

(ii) \sqrt{b} .

Answer(a)(ii) [1]

MARK SCHEME:

(a) (i)	$2^2 \times 3$	1	
(ii)	$2 \times 3 \times 7^3$	1	

3 Find the highest common factor (HCF) of 96 and 60.

..... [1]

MARK SCHEME:

12	1
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4 Find the highest common factor (HCF) of $8p^4q^8$ and $4p^3q^{10}$.

..... [2]

MARK SCHEME:

$4p^3q^8$	2	B1 for kp^3q^8 or $4p^kq^8$ or $4p^3q^k$
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5 Find the highest common factor (HCF) of 60 and 90.

Answer [1]

MARK SCHEME:

	30		1	
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6 Find the highest common factor (HCF) of $8x^3y^4$ and $12x^4y$.

..... [2]

MARK SCHEME:

	$4x^3y$ final answer	2	B1 for any 2 parts correct
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7 Find the highest common factor (HCF) of 30, 48 and 66.

..... [1]

MARK SCHEME:

6	1
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8 (b) Find the highest common factor (HCF) of 540 and 360.

..... [1]

MARK SCHEME:

180 or $2^2 \times 3^2 \times 5$	1	
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