Greatest Common Factor (G)

Name:

Date:

Use the prime factors of the numbers in each set to calculate the greatest common factor.

a) $352 = (2) \times (2) \times (2) \times (2) \times 2 \times 11$ b) 152 $48 = (2) \times (2) \times (2) \times (2) \times 3$ 176

 $\operatorname{GCF}=\textcircled{2}\times\textcircled{2}\times\textcircled{2}\times\textcircled{2}=16$

c) 24	d) 282
108	132

e) 212	f) 336
40	8

g) 72	h) 368
243	230

i) 248	j) 56
12	196

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Greatest Common Factor (G) Answers

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Date:

Use the prime factors of the numbers in each set to calculate the greatest common factor.

a)
$$352 = (2) \times (2) \times (2) \times (2) \times 2 \times 11$$

 $48 = (2) \times (2) \times (2) \times (2) \times 3$
GCF = $(2) \times (2) \times (2) \times (2) = 16$

c)
$$24 = (2) \times (2) \times 2 \times (3)$$

 $108 = (2) \times (2) \times (3) \times 3 \times 3$
GCF = $(2) \times (2) \times (3) = 12$

b)
$$152 = (2) \times (2) \times (2) \times 19$$

 $176 = (2) \times (2) \times (2) \times 2 \times 11$
GCF = $(2) \times (2) \times (2) = 8$

d)
$$282 = 2 \times 3 \times 47$$

 $132 = 2 \times 2 \times 3 \times 11$
GCF = $2 \times 3 = 6$

e)
$$212 = (2) \times (2) \times 53$$

 $40 = (2) \times (2) \times 2 \times 5$
GCF = (2) × (2) = 4

g)
$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

 $243 = 3 \times 3 \times 3 \times 3 \times 3$
GCF = 3 $\times 3 \times 3 = 9$

i)
$$248 = 2 \times 2 \times 31$$

 $12 = 2 \times 2 \times 3$
GCF = $2 \times 2 \times 3$

f)
$$336 = 2 \times 2 \times 2 \times 2 \times 3 \times 7$$

 $8 = 2 \times 2 \times 2 \times 2$
GCF = $2 \times 2 \times 2 = 8$

h)
$$368 = 2 \times 2 \times 2 \times 2 \times 23$$

 $230 = 2 \times 5 \times 23$
GCF = $2 \times 23 = 46$

j)
$$56 = (2) \times (2) \times 2 \times (7)$$

 $196 = (2) \times (2) \times (7) \times 7$
 $GCF = (2) \times (2) \times (7) = 28$