[T7-05-09-14]

Primes & divisors

à **Answer on this sheet. You will need scrap paper to do your work on.**

à **A. The prime factors of a number are given. Use them to wite all divisors of the number. Remember that *1*, which it not prime, is a divisor of every number.**

@1D 2, 3

@2D 3, 5

@3D 2, 3, 5

@4D 2, 5, 7

@5D 2, 5, 11

@6D 2, 3, 13

à **B. Answer each of the following by checking [YES] or [NO].**

[1] The prime factorization of a number is $2 \times 5 \times 7 \times 11$.

(a) Is *6* be a divisor of this number? [YES] [NO]
(b) Is *27* be a divisor of this number? [YES] [NO]
(c) Is *4* be a divisor of this number? [YES] [NO]
(d) Is *22* be a divisor of this number? [YES] [NO]

[2] The pirme factorization of a number is $2 \times 11 \times 23 \times 43$.

(a) Is 86 be a divisor of this number? [YES] [NO]
(b) Is *22* be a divisor of this number? [YES] [NO]
(c) Is *23* be a divisor of this number? [YES] [NO]
(d) Is *12* be a divisor of this number? [YES] [NO]

[3] The pirme factorization of a number is $3 \times 5 \times 7 \times 17$.

(a) Is 22 be a divisor of this number? [YES] [NO]
(b) Is *12* be a divisor of this number? [YES] [NO]
(c) Is *15* be a divisor of this number? [YES] [NO]
(d) Is *35* be a divisor of this number? [YES] [NO]

Answers

à **A. The prime factors of a number are given. Use them to wite all divisors of the number. Remember that *1*, which it not prime, is a divisor of every number.**

@1D 81, 2, 3, 6<

@2D 81, 3, 5, 15<

@3D 81, 2, 3, 5, 6, 10, 15, 30<

@4D 81, 2, 5, 7, 10, 14, 35, 70<

@5D 81, 2, 5, 10, 11, 22, 55, 110<

@6D 81, 2, 3, 6, 13, 26, 39, 78<

à **B. Answer each of the following by checking [YES] or [NO].**

[1] The prime factorization of a number is 2 ⨯ 5 ⨯ 7 ⨯ 11.
- (a) Is *6* be a divisor of this number? [YES]
- (b) Is *27* be a divisor of this number? [NO]
- (c) Is *4* be a divisor of this number? [NO]
- (d) Is *22* be a divisor of this number? [YES]

[2] The pirme factorization of a number is 2 ⨯ 11 ⨯ 23 ⨯ 43.
- (a) Is 86 be a divisor of this number? [YES]
- (b) Is *22* be a divisor of this number? [YES]
- (c) Is *23* be a divisor of this number? [YES]
- (d) Is *12* be a divisor of this number? [NO]

[3] The pirme factorization of a number is 3 ⨯ 5 ⨯ 7 ⨯ 17.
- (a) Is 22 be a divisor of this number? [NO]
- (b) Is *12* be a divisor of this number? [NO]
- (c) Is *15* be a divisor of this number? [YES]
- (d) Is *35* be a divisor of this number? [YES]