Math worksheet on *'Prime Factorization - Is Number a Multiple of Both - From Variables as Factors (Level 3)'*. Part of a broader unit on *'Factoring and Lowest Common Multiple - Advanced'*

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1

$$d = 2 \cdot 3^2 \cdot 5^2$$
$$90 = 2 \cdot 3^2 \cdot 5$$
$$150 = 2 \cdot 3 \cdot 5^2$$

Is d a multiple of both 90 and 150?

is d a multiple of 90 and 150?

a	b
Yes	No

2

$$c = 2^2 \cdot 3 \cdot 5 \cdot 7$$
$$60 = 2^2 \cdot 3 \cdot 5$$
$$210 = 2 \cdot 3 \cdot 5 \cdot 7$$

Is c a multiple of both 60 and 210?

is c a multiple of 60 and 210?

a	b
Yes	No

3

$$x = 2 \cdot 3 \cdot 5 \cdot 7^2$$
$$735 = 3 \cdot 5 \cdot 7^2$$
$$210 = 2 \cdot 3 \cdot 5 \cdot 7$$

Is x a multiple of both 735 and 210?

is x a multiple of 735 and 210?

a	b
Yes	No

4

$$x = 2 \cdot 3 \cdot 5^2 \cdot 7$$
$$510 = 2 \cdot 3 \cdot 5 \cdot 17$$
$$150 = 2 \cdot 3 \cdot 5^2$$

Is x a multiple of both 510 and 150?

is x a multiple of 510 and 150?

a	b
Yes	No

5

$$r = 3^3 \cdot 5^2$$
$$54 = 2 \cdot 3^3$$
$$135 = 3^3 \cdot 5$$

Is r a multiple of both 54 and 135?

is r a multiple of 54 and 135?

a	b
Yes	No

6

$$d = 3^2 \cdot 5^2 \cdot 7$$
$$819 = 3^2 \cdot 7 \cdot 13$$
$$525 = 3 \cdot 5^2 \cdot 7$$

Is d a multiple of both 819 and 525?

is d a multiple of 819 and 525?

a	b
Yes	No

7

$$x = 3 \cdot 5^4$$
$$375 = 3 \cdot 5^3$$
$$625 = 5^4$$

Is x a multiple of both 375 and 625?

is x a multiple of 375 and 625?

a	b
Yes	No