

MTH 151, Homework #5 Key

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1a. 12

1, 2, 3, 4, 6, 12

b. 60

1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

c. 172

1, 2, 4, 43, 86, 172

d. 210

1, 2, 3, 5, 6, 7, 10, 14, 15, 21, 30, 35, 42, 70, 105, 210

e. 400

1, 2, 4, 5, 8, 10, 16, 20, 25, 40, 50, 80, 100, 200, 400

f. 1075

1, 5, 25, 43, 215, 1075

2a. 321

2-no, 3-yes, 4-no, 5-no, 6-no, 8-no, 9-no, 10-no, 12-no

b. 540

2-yes, 3-yes, 4-yes, 5-yes, 6-yes, 8-no, 9-yes, 10-yes, 12-yes

c. 36,360

2-yes, 3-yes, 4-yes, 5-yes, 6-yes, 8-yes, 9-yes, 10-yes, 12-yes

d. 123,456,789

2-no, 3-yes, 4-no, 5-no, 6-no, 8-no, 9-yes, 10-no, 12-no

3a. $126 = 2 \cdot 3^2 \cdot 7$

b. $825 = 3 \cdot 5^2 \cdot 11$

c. $1183 = 7 \cdot 13^2$

d. $340 = 2^2 \cdot 5 \cdot 17$