

Answers

Theme 5: How Does the Universe Work? Lesson-7: Multiples and Factors

Main Coursebook

Kinaesthetic

Accept all relevant responses.

Auditory

1. 600 2. 1800

Pictorial

1. 8×7 2. 4×6 3. 6×4

Interacting better

Accept all the relevant responses.

Understanding better (page 72)

1. no 2. yes
1. a. 10, 20, 30, 40, 50 b. 12, 24, 36, 48, 60
c. 14, 28, 42, 56, 70 d. 15, 30, 45, 60, 75
e. 20, 40, 60, 80, 100 f. 25, 50, 75, 100, 125
2. a. 4, 8, 12 b. 6, 12, 18 c. 6, 12, 18
3. a. 12 and 24 b. 10 and 20 c. 12 and 24
d. 8 and 16 e. 30 and 60
- 4.

	Number	2	3	5	10
a.	72	✓	✓	✗	✗
b.	36	✓	✓	✗	✗
c.	75	✗	✓	✓	✗

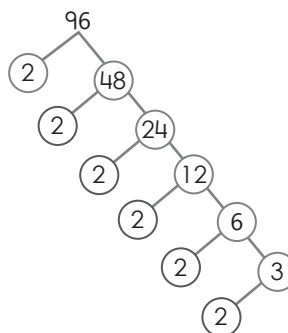
Understanding better (page 76)

1. yes 2. yes
5. a. 1, 2, 3, 6, 9, 18
b. 1, 3, 7, 21
c. 1, 3, 9, 27
d. 1, 2, 3, 5, 6, 10, 15, 30
e. 1, 2, 5, 10, 25, 50
6. a. Yes b. Yes c. No d. Yes e. Yes
7. a. The factors of 3 are: 1, 3
The factors of 4 are: 1, 2, 4
The common factor is: 1
- b. The factors of 5 are: 1, 5
The factors of 6 are: 1, 2, 3, 6
The common factor is: 1
- c. The factors of 6 are: 1, 2, 3, 6
The factors of 8 are: 1, 2, 4, 8
The common factors are: 1, 2

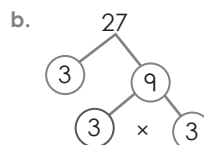
- d. The factors of 8 are: 1, 2, 4, 8
The factors of 10 are: 1, 2, 5, 10
The common factors are: 1, 2
- e. The factors of 12 are: 1, 2, 3, 4, 6, 12
The factors of 15 are: 1, 3, 5, 15
The common factors are: 1, 3
- f. The factors of 30 are: 1, 2, 3, 5, 6, 10, 15, 30
The factors of 45 are: 1, 3, 5, 9, 15, 45
The common factors are: 1, 3, 5, 15
- g. The factors of 21 are: 1, 3, 7, 21
The factors of 24 are: 1, 2, 3, 4, 6, 8, 12, 24
The common factors are: 1, 3
- h. The factors of 28 are: 1, 2, 4, 7, 14, 28
The factors of 35 are: 1, 5, 7, 35
The common factors are: 1, 7

Understanding better (page 77)

1. composite 2. 4
8. a. 15 b. 6 c. 20 d. 18
9. a.



Prime factors of 96
 $= 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3$



Prime factors of 27
 $= 3 \times 3 \times 3$

10. a.

2	72
2	36
2	18
3	9
3	3
	1

b.

2	96
2	48
2	24
2	12
2	6
3	3
	1

c.	2	56	d.	2	78	e.	2	90
	2	28		3	39		3	45
	2	14		13	13		13	15
	7	7			1			5
		1						

Solving better

1. a. 12, 7520 b. 36, 45, 651
c. 415, 540, 1245 d. 220, 710, 1870

2.

30	15	75	14	69
36	38	52	39	32
62	51	18	78	96
76	57	93	48	86
84	87	68	20	60

- a. 17 b. 8 c. 7

Learning better

- A. 1. a 2. a 3. c 4. c 5. c
B. 1. 1 2. number itself
3. two 4. 28 5. 2, 5 and 10
C. 1. 1, 3 and 13 2. 1, 7, 11 and 77
3. 1 and 3 4. 1, 7 and 14
5. 1 and 5
D. 1. 6, 12, 18, 24, 30 2. Litchis
3. 30

Thinking better

65

Choosing better

- Join the camp and participate in the activities to learn about space



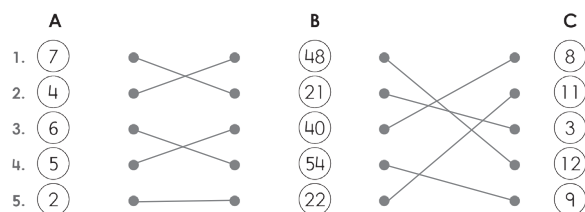
Students' Worksheets

Worksheet 1

- A. 1. false 2. true 3. false 4. false 5. true
B. 1. yes 2. no 3. yes 4. yes 5. no
C. 1. d 2. c 3. e 4. a 5. b

Worksheet 2

- A. 1. 1 and itself 2. multiples
3. itself 4. equal or smaller
5. multiple
B. 1. c 2. b 3. a 4. c 5. c
C.



Worksheet 3

- A. 1. true 2. true 3. true 4. true 5. false
B. 1. 13 2. 45 3. factors
4. 72 5. 7 and 8
C. 1. 2 2. 3 3. 9 4. 47 5. 97

Book of Holistic Teaching

Developing better

- A. **English**
He, Him, We
B. **Science**
Jupiter
C. **Social studies**
PSLV-C37

Book of Project Ideas

Making better

Accept all relevant responses.

Answers

Theme 5: How Does the Universe Work? Lesson-8: Fractions

Main Coursebook

Kinaesthetic

Accept all relevant responses.

Auditory

Jessica

Pictorial

a.



b.



Interacting better

Accept all the relevant responses.

1. a. 5 b. 10 c. 7 d. 8
2.

Proper fractions	Improper fractions	Mixed fractions
$\frac{3}{8}, \frac{6}{16}$	$\frac{15}{14}, \frac{9}{7}, \frac{11}{9}$	$4\frac{1}{8}, 2\frac{3}{4}$
	$\frac{5}{2}, \frac{10}{4}$	$9\frac{1}{2}$

3. a. $2\frac{2}{3}$ b. $2\frac{1}{8}$ c. $7\frac{1}{3}$

- d. $6\frac{5}{6}$ f. $6\frac{3}{5}$

4. a. $\frac{38}{9}$ b. $\frac{34}{3}$ c. $\frac{27}{5}$

- d. $\frac{34}{5}$ e. $\frac{15}{2}$ f. $\frac{33}{4}$

5. d. 1 c. 6

6. a. $\frac{6}{8}, \frac{9}{12}, \frac{12}{16}$ b. $\frac{10}{12}, \frac{15}{18}, \frac{20}{24}$

- c. $\frac{12}{14}, \frac{18}{21}, \frac{24}{28}$ d. $\frac{9}{15}, \frac{6}{10}, \frac{3}{5}$

e. $\frac{18}{20}, \frac{27}{30}, \frac{36}{40}$

f. $\frac{4}{18}, \frac{6}{27}, \frac{8}{36}$

7. a. $\frac{44}{45}$ b. $\frac{1}{6}$ c. $\frac{8}{9}$

d. $\frac{1}{3}$ e. $\frac{3}{5}$ f. $\frac{8}{5}$

8. a. $\frac{5}{7}$ b. $\frac{8}{18}$ c. $\frac{2}{5}$

9. a. $\frac{44}{45}$ and $\frac{44}{45}$ b. $\frac{40}{25}$ and $\frac{2}{25}$

c. $\frac{16}{56}$ and $\frac{28}{56}$ d. $\frac{3}{14}$ and $\frac{2}{14}$

10. a. > b. < c. > d. =

11. a. $\frac{3}{12} < \frac{5}{12} < \frac{7}{12}$ b. $\frac{1}{25} < \frac{8}{25} < \frac{11}{25}$

c. $\frac{9}{47} < \frac{11}{47} < \frac{22}{47}$ d. $\frac{2}{17} < \frac{5}{17} < \frac{11}{17}$

12. a. $\frac{7}{10} > \frac{3}{10} > \frac{1}{10}$ b. $\frac{11}{21} > \frac{9}{21} > \frac{5}{21}$

c. $\frac{17}{20} > \frac{11}{20} > \frac{7}{20}$ d. $\frac{9}{14} > \frac{5}{14} > \frac{3}{14}$

13. a. $\frac{8}{14}$ d. $\frac{21}{23}$ c. $\frac{28}{8}$ d. $\frac{28}{5}$

14. a. $\frac{1}{4}$ d. $\frac{5}{32}$ c. $\frac{10}{4}$ d. $\frac{16}{9}$

Understanding better (page 72)

1. no 2. yes

15. a. $\frac{7}{8}$ d. $\frac{6}{15}$ c. $\frac{9}{9}$ d. $\frac{8}{11}$

16. a. jia d. $\frac{5}{11}$ c. $\frac{2}{6}$

Solving better

1. a. 4 b. 20 c. 3 d. 8 e. 1

2. a. $\frac{21}{28}$ d. $\frac{8}{16}$ c. $\frac{9}{12}$

a. $\frac{32}{37}$ d. $\frac{10}{68}$

Learning better

- A. 1. c 2. a 3. d 4. a 5. d
 B. 1. 25 2. 12 3. 3
 4. 70 5. 3 6. 36
 C. 1. < 2. < 3. < 4. =
 D. 1. $\frac{1}{6}$ 2. $\frac{1}{2}$ 3. $\frac{3}{5}$ 4. $\frac{3}{4}$ 5. $\frac{6}{7}$
 E. 1. $2\frac{1}{3}$ 2. $6\frac{1}{2}$ 3. $2\frac{6}{7}$ 4. $7\frac{1}{5}$ 5. $7\frac{2}{6}$
 F. 1. $\frac{4}{13}$ 2. $\frac{2}{21}$ 3. $\frac{39}{3}$
 4. $\frac{5}{5}$ 5. $\frac{0}{9}$ 6. $\frac{22}{10}$
 G. 1. $\frac{5}{25}$ 2. 9 hours 3. $\frac{2}{9}$ 4. $\frac{11}{12}$ kg

Thinking better

$$\frac{3}{19}, \frac{5}{19}, \frac{7}{15}$$

$$\frac{1}{19}$$

Choosing better

- Create models of the Moon's phases with the help of her parents and grandparents. ☒

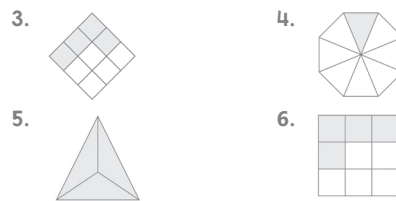
Students' Worksheets

Worksheet 1

- A. 1. fraction 2. Four 3. improper
 4. like 5. 5
 B. 1. false 2. true 3. false 4. true 5. true
 C. 1. $\frac{1}{4}$ 2. $\frac{6}{8}$ 3. $\frac{3}{5}$
 4. $\frac{4}{5}$ 5. $\frac{4}{8}$ 6. $\frac{2}{9}$

Worksheet 2

- A. 1. Denominator 2. Less
 3. Mixed 4. Unlike fractions
 5. $\frac{10}{12}$
 B. 1. false 2. true 3. false
 4. true 5. true
 C. 1.  2. 



Worksheet 3

- A. 1. A fraction in which the numerator is less than the denominator is called a proper fraction.
 2. A fraction in which the numerator is greater than or equal to the denominator is called improper fraction.
 3. A combination of a whole number and a proper fraction is called a mixed fraction.
 4. Fractions with the same denominators are called like fractions.
 5. Fractions with different denominators are called unlike fractions.
 B. 1. $\frac{5}{23}$ 2. $\frac{22}{39}$ 3. $\frac{41}{32}$ 4. $\frac{13}{12}$ 5. $\frac{23}{23}$
 C. 1. < 2. < 3. =
 4. > 5. < 6. <

Worksheet 4

- A. Accept all the relevant responses.
 B. 1. I 2. P 3. P 4. I 5. P
 C. 1. < 2. < 3. <
 4. < 5. < 6. >

Book of Holistic Teaching

Developing better

A. English

Arya has an apple. He cuts it into 6 equal parts and distributes them among Ravi, Vijay, and Tanya. Ravi takes 3 parts, Vijay takes 2 parts, and Tanya takes 1 part. Ravi has $\frac{3}{6}$, Vijay has $\frac{2}{6}$, and Tanya has $\frac{1}{6}$ of the apple.

B. Science

1. Waxing gibbous 2. Waxing crescent
 3. Waning gibbous 4. Waning crescent

C. Social studies

The weather department predicted rainy days using data from weather satellites like **INSAT** or **GOES**, which track cloud formations, temperature, and atmospheric conditions.

Book of Project Ideas

Making better

Accept all relevant responses.