future

# MATH
คณิตศาสตร์ EP ป.6 | success

: Fun practice everyday, to build basis and develop perfect Mathematics skills.

GRADE 6

INFOPRESS

# Content

## CHAPTER 2 Factor of numeral

## CHAPTER 3 Addition, Subtraction, Multiplication and Division of fraction

## CHAPTER 4 Decimal

## CHAPTER 5 Addition, Subtraction, Multiplication and Division of decimal

## CHAPTER 6 Parallels line

## CHAPTER 7 Equation and Solving equation

# CHAPTER 8 Quadrilateral

# CHAPTER 9 Circle

## CHAPTER 10 Triangles

## CHAPTER 11 3-Dimensional geometry and Volume of rectangle prism

## CHAPTER 12 Ratio and Percentage

## CHAPTER 13 Statistics and Probability

## EXAMINATION

## Exercise 3

Round the given number to the nearest ten.
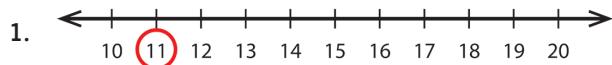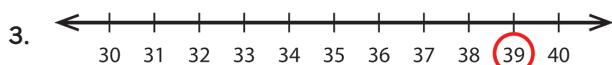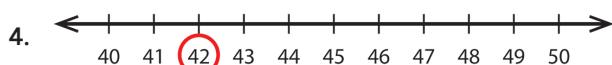
**1.**

```
10  11  12  13  14  15  16  17  18  19  20
```

The nearest ten of 11 is _____

**2.**

```
20  21  22  23  24  25  26  27  28  29  30
```

The nearest ten of 24 is _____

**3.**

```
30  31  32  33  34  35  36  37  38  39  40
```

The nearest ten of 39 is _____

**4.**

```
40  41  42  43  44  45  46  47  48  49  50
```

The nearest ten of 42 is _____

**5.**

```
50  51  52  53  54  55  56  57  58  59  60
```

The nearest ten of 56 is _____

**6.**

```
60  61  62  63  64  65  66  67  68  69  70
```

The nearest ten of 61 is _____

**7.**

```
70  71  72  73  74  75  76  77  78  79  80
```

The nearest ten of 75 is _____

**8.**

```
80  81  82  83  84  85  86  87  88  89  90
```

The nearest ten of 85 is _____

**9.**

```
80  81  82  83  84  85  86  87  88  89  90
```

The nearest ten of 89 is _____

**10.**

```
90  91  92  93  94  95  96  97  98  99  100
```
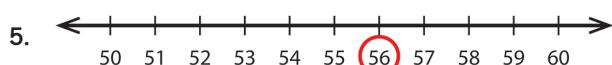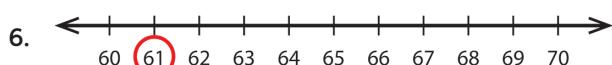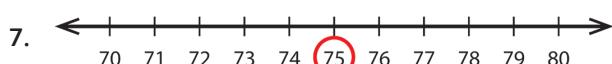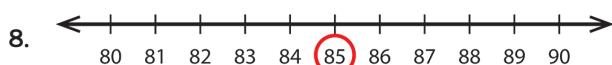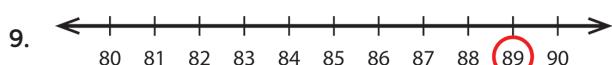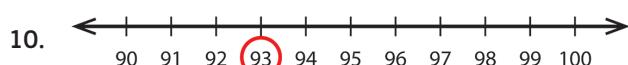
The nearest ten of 93 is _____

## Exercise 28

Find the greatest common factor by factorization.

### Example

16, 36

16 = 2 × 2 × 2 × 2

36 = 2 × 2 × 3 × 3

The greatest common factor of 16 and 36 is 2 × 2 = 4.

**1.** 66, 30

66 = _____

30 = _____

The greatest common factor of 66 and 30 is

_____

**2.** 52, 92

52 = _____

92 = _____

The greatest common factor of 52 and 92 is

_____

**3.** 38, 76

38 = _____

76 = _____

The greatest common factor of 38 and 76 is

_____

**4.** 40, 64

40 = _____

64 = _____

The greatest common factor of 40 and 64 is

_____

**5.** 42, 63

42 = _____

63 = _____

The greatest common factor of 42 and 63 is

_____

**6.** 56, 48

56 = _____

48 = _____

The greatest common factor of 56 and 48 is

_____

# Division of mixed number

To divide the mixed number, we have to convert the mixed number into the fraction first then we use the reciprocal to do it by turn the second fraction upside down. Then, we multiply the first fraction by the fraction that we turn it or that reciprocal and simplify the fraction if needed.

การหารจำนวนคละ เราต้องแปลงจำนวนคละให้เป็นเศษส่วนก่อน จากนั้นเราจึงใช้ทฤษฎีส่วนกลับเพื่อหารด้วยการกลับเศษส่วนตัวที่สอง จากนั้นจึงคูณเศษส่วนตัวแรกด้วยเศษส่วนที่เรากลับแล้วหรือส่วนกลับ และทำให้อยู่ในรูปอย่างง่าย

### Example

$$2\frac{4}{5} \div 1\frac{2}{3} = \square$$

---

**Step 1:** Convert the mixed number into the fraction.

ขั้นตอนที่ 1: แปลงจำนวนคละให้อยู่ในรูปเศษส่วน

$$2\frac{4}{5} \div 1\frac{2}{3} = \frac{14}{5} \div \frac{5}{3}$$

---

**Step 2:** Turn the second fraction upside down. So, it becomes the reciprocal.

ขั้นตอนที่ 2: กลับเศษส่วนของจำนวนที่สอง ให้กลายเป็นส่วนกลับ

$$\frac{5}{3} \text{ becomes } \frac{3}{5}$$

---

**Step 3:** Multiply the first fraction by that reciprocal and simplify the fraction if needed.

ขั้นตอนที่ 3: คูณเศษส่วนจำนวนแรกด้วยส่วนกลับของจำนวนที่สอง

$$2\frac{4}{5} \div 1\frac{2}{3} = \frac{14}{5} \div \frac{5}{3}$$

$$= \frac{14}{5} \times \frac{3}{5}$$

$$= \frac{14 \times 3}{5 \times 5}$$

$$= \frac{42}{25}$$

$$= 1\frac{17}{25}$$

## Exercise 54

Show the solution and fill the answer.

**1.** $4\dfrac{5}{8} \div \dfrac{1}{2} =$ _____

_____

_____

_____

_____

_____

_____

**2.** $5\dfrac{1}{4} \div 1\dfrac{1}{2} =$ _____

_____

_____

_____

_____

_____

_____

**3.** $3\dfrac{4}{5} \div 7\dfrac{2}{5} =$ _____

_____

_____

_____

_____

_____

_____

**4.** $2\dfrac{4}{5} \div \dfrac{6}{7} =$ _____

_____

_____

_____

_____

_____

_____

## Solve the equation by multiplication or division the same value

To solve the equation by multiply or divide the same value, we have to multiply or divide the number until we have only the variable on one side.

การแก้สมการด้วยการนำตัวเลขคูณหรือหาร เราต้องคูณหรือหารตัวเลข จนกระทั่งเราได้ตัวแปรตัวเดียวอยู่ที่ด้านหนึ่ง

**Example**

$A \div 2 = 3$

$$A \div 2 = 3$$
$$\frac{A}{2} \times 2 = 3 \times 2$$
$$A = 6$$

Check the answer: $6 \div 2 = 3$

**Example**

$6 \times B = 18$

$$6 \times B = 18$$
$$\frac{6 \times B}{6} = \frac{18}{6}$$
$$B = 3$$

Check the answer: $6 \times 3 = 18$

### Exercise 112

SCORE

Solve the equation and check the answer.

**1.** $B \times 4 = 60$

_____

_____

_____

_____

Check the answer: _____

**2.** $C \div 15 = 75$

_____

_____

_____

_____

Check the answer: _____

**3.** $31 = D \div 4$

_____

_____

_____

_____

Check the answer: _____

**4.** $510 = 51 \times E$

_____

_____

_____

_____

Check the answer: _____

## Exercise 121

Show the solution of find the area of each figure.

**Example**

A ⟶ B

3 mm.  6 mm.  3 mm.

D ⟶ C

$\square ABCD = \triangle ABD + \triangle BCD$

$= \left(\dfrac{1}{2} \times 6 \times 3\right) + \left(\dfrac{1}{2} \times 6 \times 3\right)$

$= 9 + 9$

$= 18$
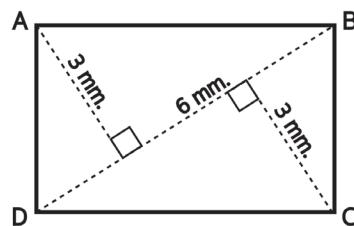
So, the area of $\square ABCD$ is 18 mm$^2$.

1. E ⟶ F

4 mm.  12 mm.  4 mm.

H ⟶ G

_____

_____

_____

_____

_____

_____

_____

_____

2. J ⟶ K

3 cm.  8 cm.

10 cm.

M ⟶ L

_____

_____

_____

_____

_____

_____

_____

_____

_____

**3.**



N
4 ft.
7 ft.
Q        O
10 ft.
P

**4.**



R        S
17 m.
8 m.
8 m.
U        T

**5.**



V        Y
10 cm.
25 cm.
10 cm.
W        X
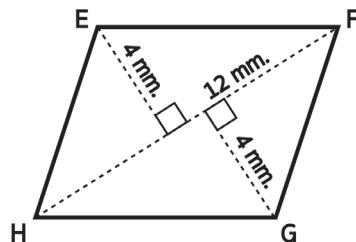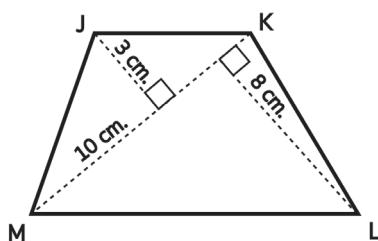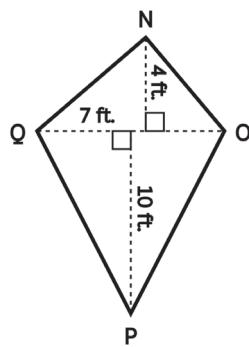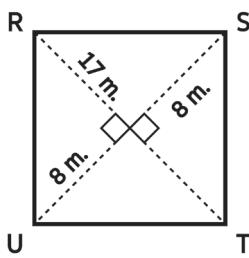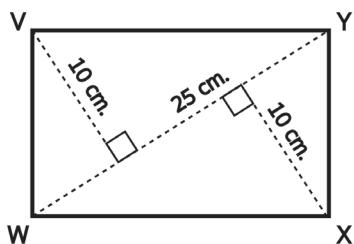
## Exercise 136

Find the area of the given triangle.

**1.**
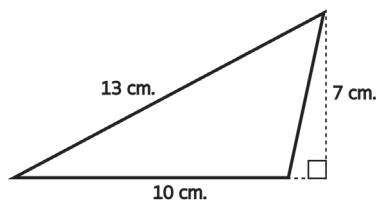
13 cm.  7 cm.  10 cm.

The area of triangle is _____

_____

_____

**2.**

7 cm.  4 cm.  11 cm.  16 cm.

The area of triangle is _____

_____

_____

**3.**

8 cm.  10 cm.  7 cm.

The area of triangle is _____

_____

_____

**4.**

24 cm.  21 cm.  30 cm.  36 cm.
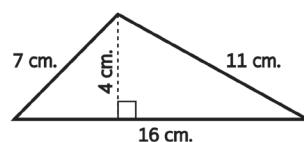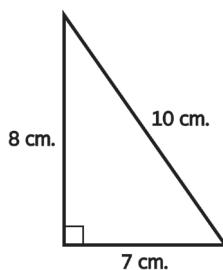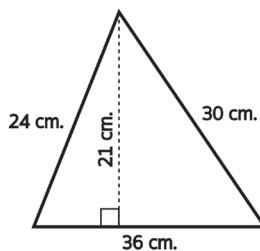
The area of triangle is _____

_____

_____

**5.**

22 cm.  16 cm.  14 cm.  10 cm.
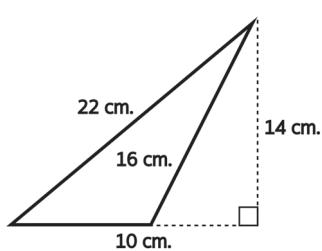
The area of triangle is _____

_____

_____

## Making line graph

the amount of the people in 2005 to 2008

| Year | 2005 | 2006 | 2007 | 2008 |
|------|------|------|------|------|
| People | 25 | 15 | 20 | 30 |

**1.** Draw the vertical scale with the tick marks, label and write the scale.

วาดมาตราส่วนแนวตั้งด้วยเครื่องหมายขีด ชื่อมาตราส่วนแนวตั้ง และเขียนมาตราส่วน

**2.** Draw the horizontal scale with the tick marks, label and write the scale.

วาดมาตราส่วนแนวนอนด้วยเครื่องหมายขีด ชื่อมาตราส่วนแนวนอน และเขียนมาตราส่วน

**3.** Put the dot for each data value

ใส่จุดสำหรับแต่ละค่าข้อมูล

**4.** Connect the dots by the line

เชื่อมต่อจุดด้วยเส้น

## Exercise 168

Answer the question by given pie chart.

The pie chart shows the favorite type of movie.

Favorite type of movies
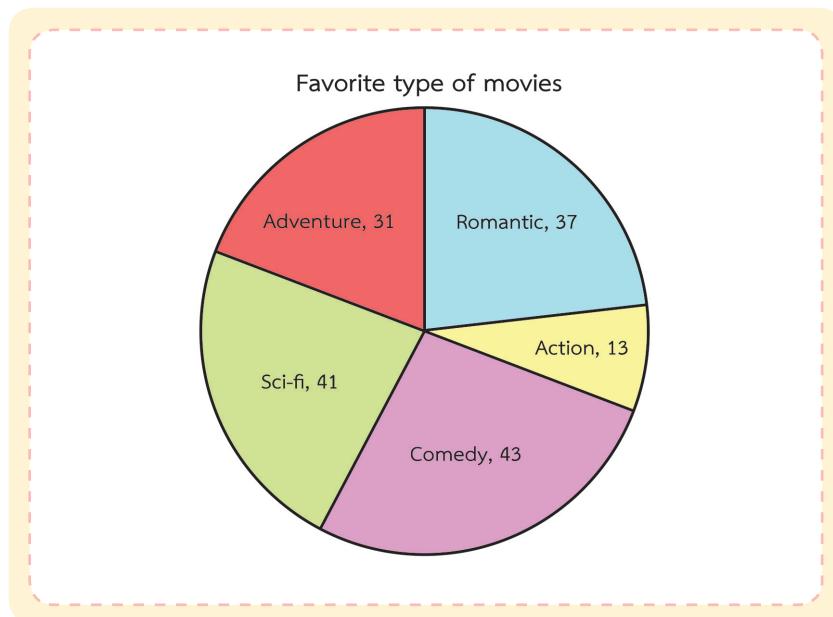


1. How many people like adventure movie?

   _____

2. How many people like romantic movie?

   _____

3. How many people like action movie?

   _____

4. How many people like comedy movie?

   _____

5. How many people like sci-fi movie?

   _____

# Chapter 14

## 3-Dimensional geometry and Volume of rectangle prism

Circle the correct answer.

1. **What is the 3D shape of the following picture?**
   a. pentagonal prism
   b. triangular prism
   c. rectangular prism
   d. square prism

2. **What is the 3D shape of the following picture?**
   a. prism
   b. cone
   c. cylinder
   d. sphere

3. **What is the 3D shape of the following picture?**
   a. triangular prism
   b. rectangular prism
   c. triangular pyramid
   d. rectangular pyramid
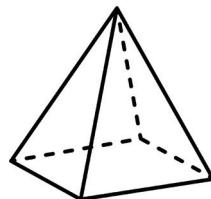
4. **What is the 3D shape of the following unfolding picture?**
   a. pentagonal pyramid
   b. square pyramid
   c. pentagonal prism
   d. square prism
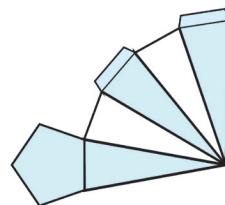
5. **What is the 3D shape of the following unfolding picture?**
   a. prism
   b. cylinder
   c. cone
   d. pyramid
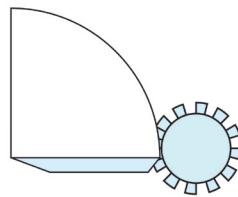
6. **What is the 3D shape of the following unfolding picture?**

   a. prism

   b. cylinder

   c. cone

   d. pyramid
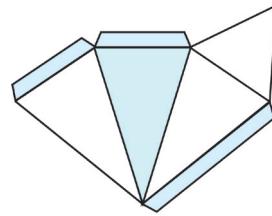
7. **What is the volume of the following figure?**

   a. 18,513 m$^3$

   b. 19,074 m$^3$

   c. 19,635 m$^3$

   d. 20,196 m$^3$

   36 m.

   51 m.

   11 m.
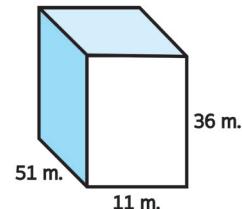
8. **What is the volume of the following figure?**

   a. 24,252 cm$^3$

   b. 28,294 cm$^3$

   c. 32,336 cm$^3$

   d. 36,378 cm$^3$

   43 cm.

   8 cm.

   94 cm.
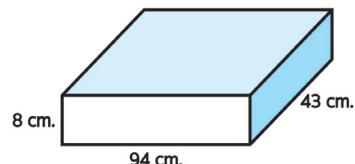
9. **What is the volume of the following figure?**

   a. 221,088 cm$^3$

   b. 223,440 cm$^3$

   c. 225,792 cm$^3$

   d. 228,144 cm$^3$

   94 cm.

   56 cm.

   42 cm.
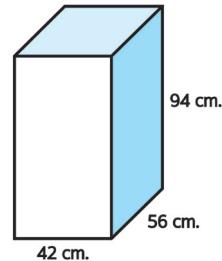
10. **What is the volume of the following figure?**

    a. 567 cm$^3$

    b. 1,134 cm$^3$

    c. 1,701 cm$^3$

    d. 2,268 cm$^3$

    2 cm.

    7 cm.

    81 cm.
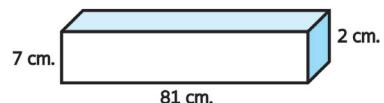
11. **What is the volume of the following figure?**

    a. 8,750 cm$^3$

    b. 10,500 cm$^3$

    c. 12,250 cm$^3$

    d. 14,000 cm$^3$

    35 cm.

    5 cm.

    50 cm.
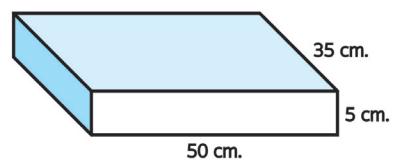
## Greatest Common Factor (by factorization)

### Exercise 28

Find the greatest common factor by factorization.

**1.** 66, 30       $66 = 2 \times 3 \times 11$       $30 = 2 \times 2 \times 3 \times 3$
The greatest common factor of 66 and 30 is $2 \times 3 = 6$

**2.** 52, 92       $52 = 2 \times 2 \times 13$       $92 = 2 \times 2 \times 23$
The greatest common factor of 52 and 92 is $2 \times 2 = 4$

**3.** 38, 76       $38 = 2 \times 19$       $76 = 2 \times 2 \times 19$
The greatest common factor of 38 and 76 is $2 \times 19 = 38$

**4.** 40, 64       $40 = 2 \times 2 \times 2 \times 5$       $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$
The greatest common factor of 40 and 64 is $2 \times 2 \times 2 = 8$

**5.** 42, 63       $42 = 2 \times 3 \times 7$       $63 = 3 \times 3 \times 7$
The greatest common factor of 42 and 63 is $3 \times 7 = 21$

**6.** 56, 48       $56 = 2 \times 2 \times 2 \times 7$       $48 = 2 \times 2 \times 2 \times 2 \times 3$
The greatest common factor of 56 and 48 is $2 \times 2 \times 2 = 8$

**7.** 55, 20       $55 = 5 \times 11$       $20 = 2 \times 2 \times 5$
The greatest common factor of 55 and 20 is 5

**8.** 45, 15       $45 = 3 \times 3 \times 5$       $15 = 3 \times 5$
The greatest common factor of 45 and 15 is $3 \times 5 = 15$

**9.** 70, 105       $70 = 2 \times 5 \times 7$       $105 = 3 \times 5 \times 7$
The greatest common factor of 70 and 105 is $5 \times 7 = 35$

**10.** 48, 84       $48 = 2 \times 2 \times 2 \times 2 \times 3$       $84 = 2 \times 2 \times 3 \times 7$
The greatest common factor of 48 and 84 is $2 \times 2 \times 3 = 12$

3. $3\frac{4}{5} \div 7\frac{2}{5} = 9\frac{1}{4}$

$$3\frac{4}{5} \div 7\frac{2}{5} = \frac{19}{5} \div \frac{37}{5}$$
$$= \frac{19}{5} \times \frac{5}{37}$$
$$= \frac{19 \times 5}{5 \times 37}$$
$$= \frac{19}{37}$$

4. $2\frac{4}{5} \div \frac{6}{7} = 3\frac{4}{15}$

$$2\frac{4}{5} \div \frac{6}{7} = \frac{14}{5} \div \frac{6}{7}$$
$$= \frac{\overset{7}{\cancel{14}}}{5} \times \frac{7}{\underset{3}{\cancel{6}}}$$
$$= \frac{7 \times 7}{5 \times 3}$$
$$= \frac{49}{15}$$
$$= 3\frac{4}{15}$$

5. $3\frac{6}{8} \div 5\frac{1}{4} = \frac{5}{7}$

$$3\frac{6}{8} \div 5\frac{1}{4} = \frac{30}{8} \div \frac{21}{4}$$
$$= \frac{\overset{10}{\underset{2}{\cancel{30}}}}{\cancel{8}} \times \frac{\overset{1}{\cancel{4}}}{\underset{7}{\cancel{21}}}$$
$$= \frac{\overset{5}{\cancel{10}} \times 1}{\underset{1}{\cancel{2}} \times 7}$$
$$= \frac{5}{7}$$

6. $3\frac{2}{4} \div \frac{5}{8} = 5\frac{3}{5}$

$$3\frac{2}{4} \div \frac{5}{8} = \frac{14}{4} \div \frac{5}{8}$$
$$= \frac{\overset{7}{\underset{2}{\cancel{14}}}}{\cancel{4}} \times \frac{\overset{}{\underset{}{8}}}{5}$$
$$= \frac{7 \times \overset{4}{\cancel{8}}}{\underset{1}{\cancel{2}} \times 5}$$
$$= \frac{28}{5}$$
$$= 5\frac{3}{5}$$

7. $2\frac{5}{6} \div \frac{3}{8} = 7\frac{5}{9}$

$$2\frac{5}{6} \div \frac{3}{8} = \frac{17}{6} \div \frac{3}{8}$$
$$= \frac{17}{\underset{3}{\cancel{6}}} \times \frac{\overset{4}{\cancel{8}}}{3}$$
$$= \frac{17 \times 4}{3 \times 3}$$
$$= \frac{68}{9}$$
$$= 7\frac{5}{9}$$

8. $2\frac{3}{6} \div 1\frac{1}{4} = 2$

$$2\frac{3}{6} \div 1\frac{1}{4} = \frac{15}{6} \div \frac{5}{4}$$
$$= \frac{\overset{3}{\underset{3}{\cancel{15}}}}{\cancel{6}} \times \frac{\overset{2}{\cancel{4}}}{\underset{1}{\cancel{5}}}$$
$$= \frac{\overset{1}{\underset{1}{\cancel{3}}} \times 2}{\cancel{3} \times 1}$$
$$= \frac{2}{1}$$
$$= 2$$

9. $6\frac{4}{5} \div \frac{1}{2} = 13\frac{3}{5}$

$$6\frac{4}{5} \div \frac{1}{2} = \frac{34}{5} \div \frac{1}{2}$$
$$= \frac{34}{5} \times \frac{2}{1}$$
$$= \frac{34 \times 2}{5 \times 1}$$
$$= \frac{68}{5}$$
$$= 13\frac{3}{5}$$

10. $4\frac{3}{6} \div \frac{5}{8} = 7\frac{1}{5}$

$$4\frac{3}{6} \div \frac{5}{8} = \frac{27}{6} \div \frac{5}{8}$$
$$= \frac{\overset{9}{\underset{2}{\cancel{27}}}}{\cancel{6}} \times \frac{8}{5}$$
$$= \frac{9 \times \overset{4}{\cancel{8}}}{\underset{1}{\cancel{2}} \times 5}$$
$$= \frac{36}{5}$$
$$= 7\frac{1}{5}$$

## Exercise 121

Show the solution of find the area of each figure.

1. $\square$EFGH = $\triangle$EFH + $\triangle$FGH

   $= \left(\dfrac{1}{2}\times12\times4\right) + \left(\dfrac{1}{2}\times12\times4\right)$

   $= 24 + 24$

   $= 48$

   So, the area of $\square$EFGH is 48 mm$^2$.

2. $\square$JKLM = $\triangle$JKM + $\triangle$KLM

   $= \left(\dfrac{1}{2}\times10\times3\right) + \left(\dfrac{1}{2}\times10\times8\right)$

   $= 15 + 40$

   $= 55$

   So, the area of $\square$JKLM is 55 cm$^2$.

3. $\square$QNOP = $\triangle$QNO + $\triangle$QOP

   $= \left(\dfrac{1}{2}\times7\times4\right) + \left(\dfrac{1}{2}\times7\times10\right)$

   $= 14 + 35$

   $= 49$

   So, the area of $\square$QNOP is 49 ft$^2$.

4. $\square$RSTU = $\triangle$RST + $\triangle$RTU

   $= \left(\dfrac{1}{2}\times17\times8\right) + \left(\dfrac{1}{2}\times17\times8\right)$

   $= 68 + 68$

   $= 136$

   So, the area of $\square$RSTU is 136 m$^2$.

5. $\square$VYXW = $\triangle$VYW + $\triangle$WYX

   $= \left(\dfrac{1}{2}\times25\times10\right) + \left(\dfrac{1}{2}\times25\times10\right)$

   $= 125 + 125$

   $= 250$

   So, the area of $\square$AVYXW is 250 cm$^2$.

6. $\square$BGTR = $\triangle$BGR + $\triangle$RGT

   $= \left(\dfrac{1}{2}\times38\times8\right) + \left(\dfrac{1}{2}\times38\times8\right)$

   $= 152 + 152$

   $= 304$

   So, the area of $\square$BGTR is 304 mm$^2$.

7. $\square$NHYP = $\triangle$NHY + $\triangle$NYP

   $= \left(\dfrac{1}{2}\times24\times10\right) + \left(\dfrac{1}{2}\times24\times18\right)$

   $= 120 + 216$

   $= 336$

   So, the area of $\square$NHYP is 336 m$^2$.

8. $\square$VFRE = $\triangle$VFR + $\triangle$VRE

   $= \left(\dfrac{1}{2}\times42\times6\right) + \left(\dfrac{1}{2}\times42\times10\right)$

   $= 126 + 210$

   $= 336$

   So, the area of $\square$VFRE is 336 ft$^2$.

9. $\square$QZSA = $\triangle$AQZ + $\triangle$AZS

   $= \left(\dfrac{1}{2}\times22\times6\right) + \left(\dfrac{1}{2}\times22\times18\right)$

   $= 66 + 198$

   $= 264$

   So, the area of $\square$QZSA is 264 ft$^2$.

10. $\square$NPFS = $\triangle$NPF + $\triangle$NFS

   $= \left(\dfrac{1}{2}\times54\times18\right) + \left(\dfrac{1}{2}\times54\times28\right)$

   $= 486 + 756$

   $= 1,242$

   So, the area of $\square$NPFS is 1,242 mm$^2$.

## Chapter 6 Parallels line

| 1. d. | 2. d. | 3. c. | 4. b. | 5. a. |
| 6. a. | 7. d. | 8. b. | ๙. d. | 10. c. |
| 11. d. | 12. c. | 13. c. | 14. b. | 15. a. |
| 16. d. | 17. d. | 18. b. | 19. a. | 20. c. |

## Chapter 7 Equation and Solving equation

| 1. b. | 2. d. | 3. d. | 4. a. | 5. b. |
| 6. b. | 7. c. | 8. b. | ๙. d. | 10. a. |
| 11. d. | 12. a. | 13. c. | 14. c. | 15. b. |
| 16. d. | 17. d. | 18. d. | 19. a. | 20. b. |

## Chapter 8 Quadrilateral

| 1. a. | 2. d. | 3. a. | 4. c. | 5. b. |
| 6. b. | 7. d. | 8. c. | ๙. a. | 10. c. |
| 11. a. | 12. c. | 13. b. | 14. d. | 15. a. |
| 16. d. | 17. d. | 18. c. | 19. c. | 20. b. |

## Chapter 9 Circle

| 1. c. | 2. d. | 3. a. | 4. b. | 5. a. |
| 6. a. | 7. b. | 8. d. | ๙. a. | 10. c. |
| 11. c. | 12. c. | 13. a. | 14. d. | 15. b. |
| 16. b. | 17. a. | 18. c. | 19. d. | 20. b. |

## Chapter 10 Triangles

| 1. a. | 2. b. | 3. d. | 4. d. | 5. c. |
| 6. a. | 7. d. | 8. c. | ๙. a. | 10. c. |
| 11. b. | 12. a. | 13. c. | 14. d. | 15. d. |
| 16. b. | 17. a. | 18. c. | 19. b. | 20. d. |

## Chapter 11 3-Dimensional geometry and Volume of rectangle prism

| 1. b. | 2. b. | 3. d. | 4. a. | 5. c. |
| 6. d. | 7. d. | 8. c. | ๙. a. | 10. b. |
| 11. a. | 12. d. | 13. d. | 14. b. | 15. b. |
| 16. c. | 17. a. | 18. c. | 19. c. | 20. c. |