

Note: Scholars are allowed to use this conversion chart on the STAAR test

STAAR GRADE 5 MATHEMATICS REFERENCE MATERIALS

LENGTH

Customary

1 mile (mi) = 1,760 yards (yd)

1 yard (yd) = 3 feet (ft)

1 foot (ft) = 12 inches (in.)

Metric

1 kilometer (km) = 1,000 meters (m)

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

VOLUME AND CAPACITY

Customary

1 gallon (gal) = 4 quarts (qt)

1 quart (qt) = 2 pints (pt)

1 pint (pt) = 2 cups (c)

1 cup (c) = 8 fluid ounces (fl oz)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 ton (T) = 2,000 pounds (lb)

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

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1. Convert 25
Kilometers to Meters.

5.7.A – Measurement: Metric Conversions – PS

2. Convert 3,000
Millimeters to Meters.

5.7.A – Measurement: Metric Conversions – PS

3. Convert 23,000
milliliters to liters.

5.7.A – Measurement: Metric Conversions – PS

4. Convert 5
kilograms to grams.

5.7.A – Measurement: Metric Conversions – PS

5. Convert 29 grams
to milligrams.

5.7.A – Measurement: Metric Conversions – PS

6. Convert 570
millimeters to
Centimeters.

5.7.A – Measurement: Metric Conversions – PS

Unit: 5th – Measurement & Data Analysis**Lesson: 5.7.A – Measurement: Metric Conversions****Problem Set 1****Tip:** Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 25 km X 1,000 M per km = 25,000 m	2 3,000 mm ÷ 1,000 mm per m = 3m	3 23,000 ml ÷ 1,000 ml per L = 23 L	4 5 kg X 1,000 g per kg = 5,000 g	5 29 G X 1,000 mg per g = 29,000 mg	6 570 mm ÷ 10 mm per cm = 57 cm
7 30 km X 1,000 m per km = 30,000 M 30,000 M X 100 cm per M = 3,000,000 cm	8 500 ml ÷ 1,000 ml per L = 0.5 L	9 54 kg X 1,000 g per kg = 54,000 g	10 4,000 mg ÷ 1,000 mg per g = 4 g 4 g ÷ 1,000 g per kg = 0.004 kg	11 50 m X 100 cm per m = 500 cm	12 350 ml ÷ 1,000 ml per L = 0.35 L
13 15 kg ÷ 1,000 g per kg = 15,000 g	14 15 kg X 1,000 g per Kg - 15,000 g 15,000 G X 1,000 mg per g = 15,000,000 mg	15 82 L x 1,000 ml x L = 82,000 ml	16 175 cm ÷ 100 cm per m = 1.75 m	17 750 mm ÷ 1,000 mm per m = 4.75 m	18 5,000 ml ÷ 1,000 ml per L = 5 L
19 34 L X 1,000 ml per L = 34,000 ml	20 18 kg X 1,000 g per kg = 18,000 g	21 150,000 mg X 100 mg per g = 150 g	22 175,000 mg ÷ 1,000 mg per g = 175 g 175 g ÷ 1,000 g per kg = 0.175 kg	23 1,250 ml ÷ 1,000 ml per L = 1.25 L	24 65 km X 1,000 m per km = 65,000 m
25 6,500 m ÷ 1,000 m per km = 6.5 K	26 850,000 mm ÷ 1,000 mm per m = 850 M	27 250 ml ÷ 1,000 ml per L = 0.25 L	28 57 g X 1,000 mg per g = 57,000 grams	29 150 km X 1,000 m per km = 150,000 m	30 95 cm ÷ 100 cm in a m = 0.95 M

7. Convert 30 kilometers to centimeters.

5.7.A – Measurement: Metric Conversions – PS

8. Convert 500 milliliters to liters.

5.7.A – Measurement: Metric Conversions – PS

9. Convert 54 kilograms to grams.

5.7.A – Measurement: Metric Conversions – PS

10. Convert 4,000 milligrams to kilograms.

5.7.A – Measurement: Metric Conversions – PS

11. Convert 50 meters to centimeters.

5.7.A – Measurement: Metric Conversions – PS

12. Convert 350 milliliters to liters.

5.7.A – Measurement: Metric Conversions – PS

Unit: 5th – Measurement & Data Analysis**Lesson: 5.7.A – Measurement: Metric Conversions****Problem Set 2****Tip:** Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 25 km X 1,000 M per km = 25,000 m	2 3,000 mm ÷ 1,000 mm per m = 3m	3 23,000 ml ÷ 1,000 ml per L = 23 L	4 5 kg X 1,000 g per kg = 5,000 g	5 29 G X 1,000 mg per g = 29,000 mg	6 570 mm ÷ 10 mm per cm = 57 cm
7 30 km X 1,000 m per km = 30,000 M 30,000 M X 100 cm per M = 3,000,000 cm	8 500 ml ÷ 1,000 ml per L = 0.5 L	9 54 kg X 1,000 g per kg = 54,000 g	10 4,000 mg ÷ 1,000 mg per g = 4 g 4 g ÷ 1,000 g per kg = 0.004 kg	11 50 m X 100 cm per m = 500 cm	12 350 ml ÷ 1,000 ml per L = 0.35 L
13 15 kg ÷ 1,000 g per kg = 15,000 g	14 15 kg X 1,000 g per Kg - 15,000 g 15,000 G X 1,000 mg per g = 15,000,000 mg	15 82 L x 1,000 ml x L = 82,000 ml	16 175 cm ÷ 100 cm per m = 1.75 m	17 750 mm ÷ 1,000 mm per m = 4.75 m	18 5,000 ml ÷ 1,000 ml per L = 5 L
19 34 L X 1,000 ml per L = 34,000 ml	20 18 kg X 1,000 g per kg = 18,000 g	21 150,000 mg X 100 mg per g = 150 g	22 175,000 mg ÷ 1,000 mg per g = 175 g 175 g ÷ 1,000 g per kg = 0.175 kg	23 1,250 ml ÷ 1,000 ml per L = 1.25 L	24 65 km X 1,000 m per km = 65,000 m
25 6,500 m ÷ 1,000 m per km = 6.5 K	26 850,000 mm ÷ 1,000 mm per m = 850 M	27 250 ml ÷ 1,000 ml per L = 0.25 L	28 57 g X 1,000 mg per g = 57,000 grams	29 150 km X 1,000 m per km = 150,000 m	30 95 cm ÷ 100 cm in a m = 0.95 M

13. Convert 15 kilograms to grams.

14. Convert 15 kilograms to milligrams.

15. Convert 82 liters to milliliters.

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

16. Convert 175 centimeters to meters.

17. Convert 4,750 millimeters to meters.

18. Convert 5,000 milliliters to liters.

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

Unit: 5th – Measurement & Data Analysis**Lesson: 5.7.A – Measurement: Metric Conversions****Problem Set 3****Tip:** Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 25 km X 1,000 M per km = 25,000 m	2 3,000 mm ÷ 1,000 mm per m = 3m	3 23,000 ml ÷ 1,000 ml per L = 23 L	4 5 kg X 1,000 g per kg = 5,000 g	5 29 G X 1,000 mg per g = 29,000 mg	6 570 mm ÷ 10 mm per cm = 57 cm
7 30 km X 1,000 m per km = 30,000 M 30,000 M X 100 cm per M = 3,000,000 cm	8 500 ml ÷ 1,000 ml per L = 0.5 L	9 54 kg X 1,000 g per kg = 54,000 g	10 4,000 mg ÷ 1,000 mg per g = 4 g 4 g ÷ 1,000 g per kg = 0.004 kg	11 50 m X 100 cm per m = 500 cm	12 350 ml ÷ 1,000 ml per L = 0.35 L
13 15 kg ÷ 1,000 g per kg = 15,000 g	14 15 kg X 1,000 g per Kg - 15,000 g 15,000 G X 1,000 mg per g = 15,000,000 mg	15 82 L x 1,000 ml x L = 82,000 ml	16 175 cm ÷ 100 cm per m = 1.75 m	17 750 mm ÷ 1,000 mm per m = 4.75 m	18 5,000 ml ÷ 1,000 ml per L = 5 L
19 34 L X 1,000 ml per L = 34,000 ml	20 18 kg X 1,000 g per kg = 18,000 g	21 150,000 mg X 100 mg per g = 150 g	22 175,000 mg ÷ 1,000 mg per g = 175 g 175 g ÷ 1,000 g per kg = 0.175 kg	23 1,250 ml ÷ 1,000 ml per L = 1.25 L	24 65 km X 1,000 m per km = 65,000 m
25 6,500 m ÷ 1,000 m per km = 6.5 K	26 850,000 mm ÷ 1,000 mm per m = 850 M	27 250 ml ÷ 1,000 ml per L = 0.25 L	28 57 g X 1,000 mg per g = 57,000 grams	29 150 km X 1,000 m per km = 150,000 m	30 95 cm ÷ 100 cm in a m = 0.95 M

19. Convert 34 liters to milliliters.

5.7.A – Measurement: Metric Conversions – PS

20. Convert 18 kilograms to grams.

5.7.A – Measurement: Metric Conversions – PS

21. Convert 150,000 milligrams to grams.

5.7.A – Measurement: Metric Conversions – PS

22. Convert 175,000 milligrams to kilograms.

5.7.A – Measurement: Metric Conversions – PS

23. Convert 1,250 milliliters to liters.

5.7.A – Measurement: Metric Conversions – PS

24. Convert 65 kilometers to meters.

5.7.A – Measurement: Metric Conversions – PS

Unit: 5th – Measurement & Data Analysis**Lesson: 5.7.A – Measurement: Metric Conversions****Problem Set 4****Tip:** Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 25 km X 1,000 M per km = 25,000 m	2 3,000 mm ÷ 1,000 mm per m = 3m	3 23,000 ml ÷ 1,000 ml per L = 23 L	4 5 kg X 1,000 g per kg = 5,000 g	5 29 G X 1,000 mg per g = 29,000 mg	6 570 mm ÷ 10 mm per cm = 57 cm
7 30 km X 1,000 m per km = 30,000 M 30,000 M X 100 cm per M = 3,000,000 cm	8 500 ml ÷ 1,000 ml per L = 0.5 L	9 54 kg X 1,000 g per kg = 54,000 g	10 4,000 mg ÷ 1,000 mg per g = 4 g 4 g ÷ 1,000 g per kg = 0.004 kg	11 50 m X 100 cm per m = 500 cm	12 350 ml ÷ 1,000 ml per L = 0.35 L
13 15 kg ÷ 1,000 g per kg = 15,000 g	14 15 kg X 1,000 g per Kg - 15,000 g 15,000 G X 1,000 mg per g = 15,000,000 mg	15 82 L x 1,000 ml x L = 82,000 ml	16 175 cm ÷ 100 cm per m = 1.75 m	17 750 mm ÷ 1,000 mm per m = 4.75 m	18 5,000 ml ÷ 1,000 ml per L = 5 L
19 34 L X 1,000 ml per L = 34,000 ml	20 18 kg X 1,000 g per kg = 18,000 g	21 150,000 mg X 100 mg per g = 150 g	22 175,000 mg ÷ 1,000 mg per g = 175 g 175 g ÷ 1,000 g per kg = 0.175 kg	23 1,250 ml ÷ 1,000 ml per L = 1.25 L	24 65 km X 1,000 m per km = 65,000 m
25 6,500 m ÷ 1,000 m per km = 6.5 K	26 850,000 mm ÷ 1,000 mm per m = 850 M	27 250 ml ÷ 1,000 ml per L = 0.25 L	28 57 g X 1,000 mg per g = 57,000 grams	29 150 km X 1,000 m per km = 150,000 m	30 95 cm ÷ 100 cm in a m = 0.95 M

25. Convert 6,500 meters to kilometers.

26. Convert 850,000 millimeters to meters.

27. Convert 250 milliliters to liters.

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

28. Convert 57 grams to milligrams.

29. Convert 150 kilometers to meters.

30. Convert 95 centimeters to meters.

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

5.7.A – Measurement: Metric Conversions – PS

Unit: 5th – Measurement & Data Analysis**Lesson: 5.7.A – Measurement: Metric Conversions****Problem Set 5****Tip:** Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 25 km X 1,000 M per km = 25,000 m	2 3,000 mm ÷ 1,000 mm per m = 3m	3 23,000 ml ÷ 1,000 ml per L = 23 L	4 5 kg X 1,000 g per kg = 5,000 g	5 29 G X 1,000 mg per g = 29,000 mg	6 570 mm ÷ 10 mm per cm = 57 cm
7 30 km X 1,000 m per km = 30,000 M 30,000 M X 100 cm per M = 3,000,000 cm	8 500 ml ÷ 1,000 ml per L = 0.5 L	9 54 kg X 1,000 g per kg = 54,000 g	10 4,000 mg ÷ 1,000 mg per g = 4 g 4 g ÷ 1,000 g per kg = 0.004 kg	11 50 m X 100 cm per m = 500 cm	12 350 ml ÷ 1,000 ml per L = 0.35 L
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19 34 L X 1,000 ml per L = 34,000 ml	20 18 kg X 1,000 g per kg = 18,000 g	21 150,000 mg X 100 mg per g = 150 g	22 175,000 mg ÷ 1,000 mg per g = 175 g 175 g ÷ 1,000 g per kg = 0.175 kg	23 1,250 ml ÷ 1,000 ml per L = 1.25 L	24 65 km X 1,000 m per km = 65,000 m
25 6,500 m ÷ 1,000 m per km = 6.5 K	26 850,000 mm ÷ 1,000 mm per m = 850 M	27 250 ml ÷ 1,000 ml per L = 0.25 L	28 57 g X 1,000 mg per g = 57,000 grams	29 150 km X 1,000 m per km = 150,000 m	30 95 cm ÷ 100 cm in a m = 0.95 M