Mental Math

Grade 11 Essential Mathematics (30S)

F–1

Unit F: Trigonometry   **Specific Learning Outcome: 11.E4.TG.1**

General Questions	Answers
1. It is 11:00 a.m. on Monday. You have a chess tournament at 6:00 p.m. on Tuesday. How many hours do you have to wait?	31 hours
2. How much would you have to pay for an 8 ft. long piece of wood if the hardwood store charges $1.95 per foot?	$15.60
3. How many millimetres are there in 32 centimetres?	320 mm
4. Simplify the fraction: $\dfrac{6}{20}$	$\dfrac{3}{10}$
5. Solve: $\dfrac{10}{x} = \dfrac{5}{4}$	$x = 8$

Unit Questions	
Use the right triangle ABC to answer questions 6 to 8.	
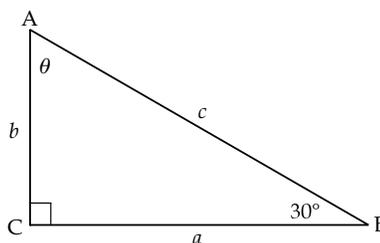
6. Find the missing angle (θ) in the above right triangle.	60°
7. If side b = 10 cm, what is the value of side c? **Hint:** $\sin 30° = 0.5 = \dfrac{1}{2}$	20 cm
8. If side a = 7 cm and side b = 4 cm, estimate the length of side c (to nearest whole number) using $c^2 = a^2 + b^2$.	8 cm

Other Questions	
9.	
10.	

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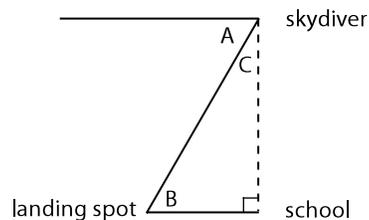| General Questions	Answers
1. What is $\frac{2}{3}$ of 180?	120
2. You cut off 17 inches of a 2 ft., 5 in. board of wood. How long is it now?	1 foot or 12 inches
3. Dagnus is 30 years old. What is his age in months?	360 months
4. Complete the pattern: 1, 2, 6, 24, 120, _____ .	720
5. How far would you travel if you drove 45 km/h for 20 minutes?	15 km

Unit Questions

Use the diagram to answer questions 6 to 8.

6. A skydiver is floating to the ground. He is looking down at his target landing spot at an angle of 60°. Where would you label 60° in the diagram above? (Angle A, B, and/or C) — **Angle A (also B)**

7. The skydiver is directly over the school. The school is 300 ft. from the landing spot. How far away is the skydiver from the landing spot?

   Hint: $\cos 60° = 0.5 = \frac{1}{2}$ — **600 feet**

8. Estimate the height of the skydiver at point A. — **$\approx$ 500 feet or 520 feet**

Other Questions

9.

10.