HOUSTON TEXANS STATS CHALLENGE
PRESENTED BY **Schlumberger**

RATIOS & RATES
ANSWER KEY

EXTENDED LEARNING

1. In the 2020 Week 16 Houston Texans vs Cincinnati Bengals game, the Texans successfully converted 4 of their 9 third downs to a first down or a scoring play. Use this information to complete the following sentence.

The ratio of successful conversions to unsuccessful conversions is __4 : 5__, so the number of successful conversions is ___less than___ the number of unsuccessful conversions.

2. The Houston Texans players study their playbooks each week to prepare for gameday. Justin Reid can learn 3 new plays in 10 minutes. If he continues at this rate, how long would it take him to learn 120 plays?

$$\underset{\times 40}{\frac{3 \text{ plays}}{10 \text{ minutes}}} = \underset{\times 40}{\frac{120 \text{ plays}}{x \text{ minutes}}}$$

x = 400 minutes
or
6 hours 40 minutes
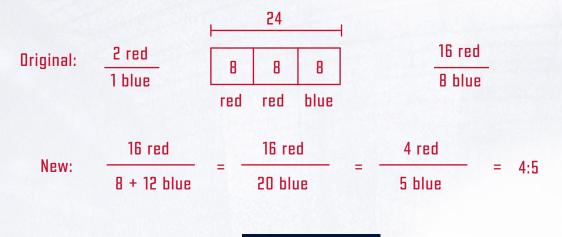
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3. Houston Texans mascot TORO takes the field before each home game and throws red t-shirts and blue t-shirts to fans in the crowd. He starts with 24 t-shirts in his back pack. The ratio of red t-shirts to blue t-shirts is 2:1. Before going out TORO decides to add 12 more blue t-shirts to his backpack. What is the new ratio of red t-shirts to blue t-shirts?

Original: $\dfrac{2 \text{ red}}{1 \text{ blue}}$

24

| 8 | 8 | 8 |
| red | red | blue |

$\dfrac{16 \text{ red}}{8 \text{ blue}}$

New: $\dfrac{16 \text{ red}}{8 + 12 \text{ blue}} = \dfrac{16 \text{ red}}{20 \text{ blue}} = \dfrac{4 \text{ red}}{5 \text{ blue}} = 4:5$

ENRICHMENT

Look at the Final Individual Statistics on one of the Stats Reports. It includes statistics on how the quarterbacks from both teams performed in the game. Write ratios comparing the number of passes attempted, the number of completions, the number of interceptions, and the number of yards gained for each player. Use these ratios to determine who you think had the better game.

TERMINOLOGY

A **completion** is when a receiver successfully catches a pass thrown by the quarterback. An **interception** happens when a member of the defensive team catches a ball thrown by the quarterback instead of the intended receiver. This results in a turnover and the defense gets the ball.

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The Stats Challenge curriculum was developed by educators at Region 4 in conjunction with the Houston Texans

#TexansStatsChallenge